Analytical Data Package Prepared For

CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica Inc TARL

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Data Package Contains 137 Pages

Report Nbr: 62283

ВАТСН	4227042	4227040	4227044	4227042	4227040	4227044	4227042	4227040	4227044	4227047	4227042	4227040	4245067	4227044	4227047
RPT DB ID	9M4LQD10	9M4LQD10	9M4LQF10	9M4LQF10	9M4LQF10	9M4LQG10	9M4LQG10	9M4LQG10	9M4LQJ10	9M4LQJ10	9M4LQJ10	9M4LQJ10	9M4LQJ30	9M4LQK10	9M4LQK10
WORK ORDER	M4LQD1AA	M4LQD1AC	M4LQF1AA	M4LQF1AC	M4LQF1AD	M4LQG1AA	M4LQG1AC	M4LQG1AD	M4LQJ1AA	M4LQJ1AD	M4LQJ1AE	M4LQJ1AF	M4LQJ3AC	M4LQK1AA	M4LQK1AD
LOT Nbr	J4H120409-1	J4H120409-1	J4H120409-2	J4H120409-2	J4H120409-2	J4H120409-3	J4H120409-3	J4H120409-3	J4H120409-4	J4H120409-4	J4H120409-4	J4H120409-4	J4H120409-4	J4H120409-5	J4H120409-5
CLIENT ID NUMBER	B2X7Y1	B2X7Y1	B2X7Y8	B2X7Y8	B2X7Y8	B2X7Y9	B2X7Y9	B2X7Y9	B2X811	B2X811	B2X811	B2X811	B2X811	B2X812	B2X812
ORDER Nbr	S14-008	Name and Address a	a same have			* And a series of the				one other states and the	a a market a series and a series	a Al-Lathanna	,	and constant of the same	
SDG Nbr	W06843														

Common

Report Nbr: 62283

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH	
W06843	\$14-008	B2X812	J4H120409-5	M4LQK1AE	9M4LQK10	4227042	
		B2X812	J4H120409-5	M4LQK1AF	9M4LQK10	4227040	
		B2X812	J4H120409-5	M4LQK2AC	9M4LQK20	4245067	
	114-035	B2X605	J4H120419-1	M4LW71AA	9M4LW710	4224083	
		B2X5X6	J4H130433-1	M4L791AA	9M4L7910	4225075	
		B2X670	J4H130433-10	M4L8P1AA	9M4L8P10	4225075	
	114-035	B2X680	J4H130433-11	M4L8Q1AA	9M4L8Q10	4227044	
		B2X680	J4H130433-11	M4L8Q1AC	9M4L8Q10	4227041	
		B2X680	J4H130433-11	M4L8Q1AD	9M4L8Q10	4227048	
		B2X680	J4H130433-11	M4L8Q1AE	9M4L8Q10	4227042	
	s občis blood	B2X682	J4H130433-12	M4L8V1AA	9M4L8V10	4225075	
		B2X610	J4H130433-2	M4L8A1AA	9M4L8A10	4227044	
	, and the state of	B2X632	J4H130433-3	M4L8C1AA	9M4L8C10	4227044	
		B2X632	J4H130433-3	M4L8C1AC	9M4L8C10	4227041	
		B2X632	J4H130433-3	M4L8C1AD	9M4L8C10	4227045	
	and the same of th	B2X632	J4H130433-3	M4L8C1AE	9M4L8C10	4227048	
		B2X632	J4H130433-3	M4L8C1AF	9M4L8C10	4227042	
		B2X634	J4H130433-4	M4L8D1AA	9M4L8D10	4225075	
		B2X641	J4H130433-5	M4L8E1AA	9M4L8E10	4225075	
		B2X656	J4H130433-6	M4L8G1AA	9M4L8G10	4227044	
		B2X656	J4H130433-6	M4L8G1AC	9M4L8G10	4227041	
		B2X656	J4H130433-6	M4L8G1AD	9M4L8G10	4227045	
		B2X656	J4H130433-6	M4L8G1AE	9M4L8G10	4227048	
	mak habit di akun	B2X656	J4H130433-6	M4L8G1AF	9M4L8G10	4227042	
		B2X658	J4H130433-7	M4L8H1AA	9M4L8H10	4225075	
		B2X663	J4H130433-8	M4L8J1AA	9M4L8J10	4227041	

Report Nbr: 62283

} !			TOT	daudo Adom	DPT NR IN BATCH	RATCH	
_	ORDER Nbr	CLIENT ID NUMBER	LO1 Nor	WORN UNDER	M I DD ID	DAICH	- 1
	114-035	B2X665	J4H130433-9 M4L8L1AA	M4L8L1AA	9M4L8L10	4225075	
·	L14-036	B2X6J3	J4H140432-1	M4MMT1A	9M4MMT10	4227049	
		B2X6M9	J4H140432-2	M4MMV1A	9M4MMV10	4227049	
	~~	B2X6N0	J4H140432-3	M4MMW1A	9M4MMW10	4227049	
		B2X6M3	J4H140432-4	M4MMX1A	9M4MMX10	4227049	
		B2X6M3	J4H140432-4	M4MMX1A	9M4MMX10	4227042	
		B2X6M3	J4H140432-4	M4MMX1A	9M4MIMX10	4227040	
		B2X6M3	J4H140432-4	M4MMX2A	9M4MMX20	4248049	



Certificate of Analysis

CH2M Hill Plateau Remediation Company P.O. Box 1600 Mail Stop – R3-60 Richland, WA 99352

September 15, 2014

Attention: Scot Fitzgerald

SAF Number : I14-035, I14-036, S14-008

Date SDG Closed : August 13, 2014 Number of Samples : Twenty two (22)

Sample Type : Water SDG Number : W06843

Data Deliverable : 30-Day / Summary

CASE NARRATIVE

I. Introduction

Between August 11, 2014 and August 13, 2014, twenty two water samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the CH2M specific IDs:

CH2M ID#	TARL ID#	DATE OF RECEIPT	<u>MATRIX</u>
B2X7Y1	M4LQD	8/11/14	WATER
B2X7Y8	M4LQF	8/11/14	WATER
B2X7Y9	M4LQG	8/11/14	WATER
B2X811	M4LQJ	8/11/14	WATER
B2X812	M4LQK	8/11/14	WATER
B2X605	M4LW7	8/12/14	WATER
B2X5X6	M4L79	8/13/14	WATER
B2X610	M4L8A	8/13/14	WATER
B2X632	M4L8C	8/13/14	WATER
B2X634	M4L8D	8/13/14	WATER
B2X641	M4L8E	8/13/14	WATER
B2X656	M4L8G	8/13/14	WATER

CH2M Hill Plateau Remediation Company September 15, 2014

 B2X658	M4L8H	8/13/14	WATER	
B2X663	M4L8J	8/13/14	WATER	
 B2X665	M4L8L	8/13/14	WATER	
B2X670	M4L8P	8/13/14	WATER	
B2X680	M4L8Q	8/13/14	WATER	
B2X682	M4L8V	8/13/14	WATER	
B2X6J3	M4MMT	8/12/14	WATER	
B2X6M9	M4MMV	8/12/14	WATER	
B2X6N0	M4MMW	8/12/14	WATER	
B2X6M3	M4MMX	8/12/14	WATER	

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

During the monthly phone call on November 13, 2013 TARL was notified that all groundwater samples received will continue to have a 30 day turnaround time regardless if the chain of custodies have a turn around time that is greater than 30 days.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Gas Proportional Counting

Gross Alpha by method RL-GPC-001 Gross Beta by method RL-GPC-001 Strontium-90 by method RL-GPC-003

Gamma Spectroscopy

Gamma Spec by method RL-GAM-001 Iodine-129 (LL) by method RL-GAM-002

Liquid Scintillation Counting

Carbon-14 by method RL-LSC-008

Technetium-99 by TEVA method RL-LSC-014

Tritium by method RL-LSC-005

Laser Induced Phosphorimetry

Total Uranium by method RL-KPA-003

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample

CH2M Hill Plateau Remediation Company September 15, 2014

(LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Gas Proportional Counting

Gross Alpha by method RL-GPC-001:

The MDA for samples B2X811 and B2X812 exceed the CRDL due to reduced aliquots based on weight screening results. Except as noted, the LCS, batch blank, samples and sample duplicate (B2X811) results are within contractual requirements.

Gross Beta by method RL-GPC-001:

The MDA for samples B2X811, B2X812 and B2X812 DUP exceeds the CRDL due reduced aliquots based on weight screening results. Except as noted, the LCS, batch blank, samples and sample duplicate (B2X812) results are within contractual requirements.

Strontium-90 by method RL-GPC-003:

The LCS, batch blank, samples and sample duplicate (B2X680) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec by method RL-GAM-001:

The LCS, batch blank, samples and sample duplicate (B2X632) results are within contractual requirements.

Iodine-129 (LL) by method RL-GAM-002:

The LCS, batch blank, samples and sample duplicate (B2X6J3) results are within contractual requirements.

Liquid Scintillation Counting

Carbon-14 by method RL-LSC-008:

The LCS, batch blank, samples and sample duplicate (B2X632) results are within contractual requirements.

Technetium-99 by TEVA method RL-LSC-014:

The LCS, batch blank, samples, sample duplicate (B2X7Y1) and sample matrix spike (B2X7Y1) results are within contractual requirements.

Tritium by method RL-LSC-005:

The initial batch, 4227044, duplicates were out of acceptance criteria. There were also spurious counts on the method blank, possibly due to electrostatic discharge. The count was recalculated however the MDA was above the CRDL. Batch 4248049 was a recount of the original batch, this batch had the duplicates in agreement and the blank was within acceptable limits. Except as noted, the LCS, batch blank, samples and sample duplicate (B2X6M3) results are within contractual requirements.

CH2M Hill Plateau Remediation Company September 15, 2014

Total Uranium

Total Uranium by method RL-KPA-003:

The LCS, batch blank, samples, sample duplicate (B2X7Y1) and sample matrix spike (B2X7Y8) results are within contractual requirements.

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

Batch 4225075:

The LCS, batch blank, samples, sample duplicate (B2X605) sample matrix spike (B2X605) and matrix spike duplicate (B2X605) results are within contractual requirements.

Batch 4224083:

The LCS, batch blank, samples, sample duplicate (B2X5X6) sample matrix spike (B2X5X6) and matrix spike duplicate (B2X5X6) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Whitney Ritari Project Manager

Drinking Water Method Cross References

	DRINKING WATER A	STM METHOD CROSS REFERENCES
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No
EPA 901.1	Cs-134, I-131	RL-GAM-001
PA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Copreci	pitation) RL-GPC-002
EPA 903.0	Total Alpha Radium (I	Ra-226) RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_0) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/?n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

	Report Definitions
Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) u _{c _} Combined Uncertainty.	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c the combined uncertainty. The uncertainty is absolute and in the same units as the result.
(#s), Coverage	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
Factor CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt(TPUs ² + TPUd ²)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

9/15/201	9/15/2014 2:00:54 PM	M			Tes	TestAmerica Inc	ca In	c Report		J	787	<u> </u>	Lab Code: TARL	
FormNbr:	۳	FormatType: FEAD	EAD Version:	ion: 05	Rpt Ni	Rpt Nbr: 62283	ïĽ	ïle Name: h:\F	Reportdb∖ed	wاند عرانهاید d\FeadIV\Rad\W068	43.Edd, h:\Repo	rtdb\edc	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	
Lab Sample Id:	Client Id:	Test User	Contract	SAF Nbr	1.	QC Type:		Moisture/ Solids%:	Distilled Volume	Sample On Date:		Colle	Collection Date:	
9M4L8A10	B2X610		MW6-SBB-A1 114-035		VVU0845	Tot11 25	Ç İst	MDA	TrcYield	Method	Ala Size	Unit	ate/Time	Act
Batch 4227044	Analyte H-3	CAS# 10028-17-8	2.86E+03		2.3E+02	2	B D	70		**************************************	5.029E-03		22	_
Lab Sample Id:	Client	Test User	Contract	SAF Nbr	r Sdg Nbr:	QC Type:		Moisture/ Solids%*:	Distilled Volume	Sample On Date:		S	Collection Date:	
9M4L8C10	B2X632		MW6-SBB-A1	114-035	W06843							08/13/2(08/13/2014 10:45	
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA Tro	TrcYield	Method		Unit	lime	Act
4227044	H-3	10028-17-8	1.32E+03	pCi/L	1.9E+02	2.1E+02		3.42E+02 100.0		906.0_H3_LSC	5.017E-03			
4227041	C-14	14762-75-5	7.26E+02	pCi/L	2.0E+01	4.5E+01		1.75E+01 1	100.0 C	C14_LSC	7.51E-02	<u>. </u>		
4227045	09-00	10198-40-0	2.43E-01	pCi/L	1.5E+00	1.5E+00	⊃	2.88E+00	O	GAMMA_GS	2.5042E+00			_
4227045	CS-134	13967-70-9	-1.45E+00	pCi/L	1.7E+00	1.7E+00	n	2.60E+00	Ð	GAMMA_GS	2.5042E+00		09/08/2014 19:01	Se -
4227045	CS-137	10045-97-3	-4.71E-01	pCi/L	1.5E+00	1.5E+00	D	2.62E+00	O	GAMMA_GS	2.5042E+00		09/08/2014 19:01	pt
	EU-152	14683-23-9	5.18E-02	pCi/L	3.9E+00	3.9E+00	n	6.97E+00	U	GAMMA_GS	2.5042E+00		09/08/2014 19:01	en -
a 4227045	EU-154	15585-10-1	2.95E+00	pCi/L	4.5E+00	4.5E+00	⊃	8.94E+00	Ю	GAMMA_GS	2.5042E+00	_ 	09/08/2014 19:01	nbe
	EU-155	14391-16-3	-8.82E-01	pCi/L	3.6E+00	3.6E+00	⊃	5.56E+00	O	GAMMA_GS	2.5042E+00		09/08/2014 19:01	er –
_	K-40	13966-00-2	-6.38E+01	pCi/L	4.3E+01	4.3E+01	⊃	8.86E+01	O	GAMMA_GS	2.5042E+00		09/08/2014 19:01	16 _
	SB-125	14234-35-6	-1.71E+00	pCi/L	3.8E+00	3.8E+00	\supset	6.34E+00	O	GAMMA_GS	2.5042E+00		09/08/2014 19:01	, 2 _
4227048	Sr-89/90	SR-RAD	3.92E-02	pCi/L	1.8E-01	1.8E-01	⊃	4.22E-01 9	97.5 S	SRTOT_SEP_PRE	1,0004E+00		09/08/2014 22:19	.01 _
4227042	Tc-99	14133-76-7	3.43E+01	pCi/L	5.1E+00	7.0E+00		9.62E+00 1	100.0 T	TC99_ETVDSK_LS	1.249E-01		08/27/2014 04:14	I4 -
Lab	Client	Test	Contract	SAF Nbr	Sdg	၁၀		Moisture/	Distilled	Sample		Soll	Collection Date:	
Sample Id:	1 d: B2X656	User	NDr MW6-SBB-A1 114-035	114-035	W06843			. 0/ spi) or other transfer of the contract of the con			08/13/20	08/13/2014 08:40	
	A 1 - 4	: :# (41.000		36 H#4	2C 140 T	-	MDA Tro	TrcVield	Method	Ala Size	Unit	Analy Date/Time A	Act
batcn 4227044	Analyte H-3	CAS# 10028-17-8	5.23E+02		2	7		70		906.0_H3_LSC	~		20	
4227041	C-14	14762-75-5	9.77E+01	pCi/L	1.0E+01	1.3E+01		1.75E+01 1	100.0 C	C14_LSC	7.50E-02		09/10/2014 10:39	
4227045	09-00	10198-40-0	-3.87E-01	pCi/L	1.6E+00	1.6E+00	⊃	2.79E+00	Ŋ	GAMMA_GS	2.5116E+00		09/08/2014 19:01	
4227045	CS-134	13967-70-9	-1.18E+00	pCi/L	1.9E+00	1.9E+00	⊃	3.09E+00	O	GAMMA_GS	2.5116E+00	–	09/08/2014 19:01	_
4227045	CS-137	10045-97-3	-8.79E-01	pCi/L	1.9E+00	1.9E+00	⊃	2.57E+00	O	GAMMA_GS	2.5116E+00		09/08/2014 19:01	
4227045	EU-152	14683-23-9	2.45E+00	pCi/L	3.9E+00	3.9E+00	⊃	6.98E+00	O	GAMMA_GS	2.5116E+00	-	09/08/2014 19:01	
4227045	EU-154	15585-10-1	7.05E-01	pCi/L	4.8E+00	4.8E+00	⊃	8.72E+00	9	GAMMA_GS	2.5116E+00	–	09/08/2014 19:01	_
4227045	EU-155	14391-16-3	8.68E-01	pCi/L	3.6E+00	3.6E+00	⊃	6.29E+00	Ю	GAMMA_GS	2.5116E+00		09/08/2014 19:01	_
4227045	K-40	13966-00-2	-4.16E+01	pCi/L	4.9E+01	4.9E+01	⊃	1.02E+02	ŋ	GAMMA_GS	2.5116E+00		09/08/2014 19:01	_
TestAmerica Inc	a Inc		U Qual - A	unalyzed i	or, but the	e result is l	ess tha	n the Mdc or	r gamma	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.	ify the nuclid	ట	I	1
rptFeadR	rptFeadRadSummaryEdd v3.48	yEdd v3.48	J Qual - No U qualifier has be B Qual- Analyte was found in	Vo U qual malyte wa	ifier has b is found it	een assigne the associ	ed and iated la	en assigned and the result is below the Reporting the associated laboratory blank above the MDC.	below the ank above	J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.	(CRDL).	,·		

Page 10 of 137

FormNbr: R FormatType: FEAD 4227045 SB-125 14234-35-6 4227048 Sr-89/90 SR-RAD 4227042 Tc-99 14133-76-7 2 Lab Client Test Co Sample Id: Id: User MW6 Batch Analyte CAS# Co Lab Client Test Co Sample Id: Id: User MW6 Sample Id: Id: User Co Sample Id: Id: User CAS# Aualyte CAS# MW6 Batch Analyte CAS# 4227044 H-3 10028-17-8 1 4227041 C-14 14762-75-5 3	2.67E	0.001000										
SB-125 Sr-89/90 Tc-99 Client i: ld: B2X663 Analyte C-14 Client i: ld: D B2X680 Analyte H-3 C-14		version: 05		Rpt Nbr: 62283	33	File Name: 1	:\Reportdb\	edd\FeadIV\Rad\W068	343.Edd, h:\Rep	ortdb\edc	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	_
Client d: ld: 0 B2X663 Analyte C-14 Client d: ld: 0 B2X680 Analyte H-3 C-14	-2.95E-02 6-7 2.36E+01	E+00 pCi/L E-02 pCi/L +01 pCi/L	L 3.6E+00 L 1.8E-01 L 4.7E+00	00 3.6E+00 01 1.8E-01 00 6.4E+00	2 T 8	6.05E+00 4.37E-01 96.7 9.51E+00 100.0	96.7	GAMMA_GS SRTOT_SEP_PRE TC99_ETVDSK_LS	2.5116E+00 1.0007E+00 1.269E-01		09/08/2014 19:01 09/08/2014 22:19 08/27/2014 05:17	
C-14 Client d: ld: 0 B2X680 Analyte H-3 C-14	Contract Nbr MW6-SBB- Result	A1 13	င် န	g nr: 443 TotU 2	QC I Type: 8	Moisture/ Solids%*: MDA	Distilled Volume TrcYield			Colls D 08/13/20 Unit	Collection Date: 08/13/2014 08:23 Unit Analy Date/Time	Act
Analyte H-3 C-14		33 A4 11	.3.	1.0E+		1.76E+01 100.0 Moisture/ Distil Solids%*: Volu	100,0 Distilled Volume	C14_LSC Sample On Date:	7.50E-02	Colk D D 08/13/20	L 09/10/2014 11:42 Collection Date: 08/13/2014 11:13	_
4227048 Sr-89/90 SR-RAD 4227042 Tc-99 14133-76-7	7-8 5-5 5-7	It Unit +02 pCi/L +00 pCi/L -02 pCi/L E-01 pCi/L	t cntU 2S 1 1.5E+02 1 7.4E+00 1 2.0E-01 1 3.9E+00	S Totu 28 -02 1.6E+02 -00 8.7E+00 01 2.0E-01 -00 5.1E+00	3 Qual 22 U 30 U 11 U	MDA 3.46E+0: 1.74E+0 4.56E-01 9.63E+0	TrcYield 2 100.0 1 100.0 100.0	Method 906.0_H3_LSC C14_LSC SRTOT_SEP_PRE TC99_ETVDSK_LS	Alq Size 5.013E-03 7.50E-02 1.0065E+00	U L L L L	Analy Date/Time 08/19/2014 05:30 09/10/2014 12:45 09/08/2014 22:19 08/27/2014 06:20	Act
Lab Client Test Sample Id: Id: User 9M4LQD10 B2X7Y1 CAS# Batch Analyte CAS# 4227042 Tc-99 14133-76-7 4227040 Uranium 7440-61-1	Contract Nbr NW6-SBB-A1 Result 6-7 1.32E+03 -1 1.54E+01	ò	2	lg or: 543 TotU 2 1 7.7E+	OC 1 Type: \$ 15 Qual -01	Moisture/ Solids%*: MDA 9,22E+00	Distilled Volume TrcYield	Sample On Date: Method TC99_ETVDSK_LS UTOT_KPA	Alq Size 1.309E-01 2.54E+01	Colle D 08/11/20 Unit L	Collection Date: 08/11/2014 12:57 Unit Analy Date/Time L 08/26/2014 20:55 ML 09/09/2014 08:27	- Act
Lab Client Test Sample Id: Id: User 9MALQF10 B2X7Y8 CAS# Batch Analyte CAS# 4227044 H-3 10028-17-8 4227042 Tc-99 14133-76-7 4227040 Uranium 7440-61-1	Contract Nbr NW6-SBB-A1 Result 7-8 -7.45E+01 6-7 2.12E-01	ပ်	2 - 2 - 5	ig nr: 443 TotU 2 2 1.5E+ 0 5.1E+ 3 1.3E-	OC Type: \$ \$ Qual 02 U -00 U	Moisture/ Solids%*: MDA 3.65E+0; 9.45E+07	Distilled Volume Volume TrcYield 2 100.0	Sample On Date: Method 906.0_H3_LSC TC99_ETVDSK_LS UTOT_KPA	Alq Size 5.025E-03 1.273E-01 2.76E+01	Colle 08/11/20 Unit L L	Collection Date: 08/11/2014 07:40 Unit Analy Date/Time L 08/18/2014 19:49 L 08/26/2014 21:57 ML 09/09/2014 08:31	Act
Lab Client Test Sample Id: Id: User 9M4LQG10 B2X7Y9 CAS# Batch Analyte CAS# 4227044 H-3 10028-17-8	Contract Nbr NW6-SBB-A1 Result 7-8 7.51E+03	ν̈́	် ဥ်ကိ	tg or: 343 TotU 2 2 4.1E+	QC Type: \$	Moisture/ Solids%*: MDA 3.47E+0	Distilled Volume TrcYield 2 100.0	Sample On Date: Method 906.0_H3_LSC	Alq Size 5.00E-03	Colle 08/11/20 Unit	Collection	Act -

		ı			1	Septer	nbe	er 16, i	2014	4	1		1		ı	
	ס			- Act		Act	_		Act			•	Act		- Act	8
Lab Code: TARL	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	08/26/2014 23:00 - 09/09/2014 08:39	Collection Date: 08/11/2014 11:26	Analy Date/Time 08/18/2014 22:35 08/28/2014 08:15	09/09/2014	Collection Date: 08/11/2014 11:26 Unit Analy Date/Time	09/06/2014 18:17	Collection Date: 08/11/2014 11:26			09/09/2014 08:43	Collection Date: 08/11/2014 11:26	Analy Date/Time 09/06/2014 18:17	Collection Date: 08/12/2014 10:57	Analy Date/Time 09/05/2014 23:27	
	ortdb\e	L M	CO 08/11	Unit		Co 08/11/ Unit	_	Co 08/11/	Unit		M	Co 08/11/	Unit L	Co	Unit	<u></u>
	843.Edd, h:\Repo	S 1.259E-01 2.73E+01		Alq Size 5.006E-03 8.72E-02		Alq Size	A 5.21E-02		Alq Size 5.014E-03	A 8.73E-02 S 1.277E-01	3.00E+01		Alq Size 5.28E-02		Alq Size 3.8166E+00	t (CRDL).
	edd\Fead!V\Rad\W06	TC99_ETVDSK_LS UTOT_KPA	Sample On Date:	Method 906.0_H3_LSC 9310_AI_PHABETA	TC99_ETVDSK_LS UTOT_KPA	Sample On Date: Method	9310_ALPHABETA	Sample On Date:	Method 906.0_H3_LSC	9310_ALPHABETA 8.73E-02 TC99_ETVDSK_LS 1.277E-01	UTOT_KPA		Method 9310_ALPHABETA	Sample On Date:	Method 1129LL_SEP_LEPS	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
Report	: h:\Reportdb\e	9.61E+00 100.0 7.68E-02	Distilled Volume	MDA TrcYield 3.47E+02 100.0 5.08E+00 100.0	9.51E+00 100.0 7.62E-02	Distilled Volume TrcYield	4.06E+00 100.0	Distilled Volume	MDA TrcYield 3.46E+02 100.0	4.64E+00 100.0 9.44E+00 100.0	12	Distilled Volume	MDA TrcYield 4.72E+00 100.0	Distilled Volume	TrcYield	he result is less than the Mdc or gamma scan did no been assigned and the result is below the Reporting
	File Name	9.61E+00 7.68E-02	Moisture/ Solids%*:		9.51E+00 7.62E-02	Mois	4.06E+	Mois		4.64E+I	6.99E-02	Moisture/ Solids%*:	,	Moisture/ Solids%*:	i MDA 2.61E-01	than the Monday
ica			, ;;	Qual		Gual		<u></u>	Qual				Qual		Qual	less ned a
TestAmerica Inc	Nbr: 62283	6.2E+02 1.1E+01	QC Type:	TotU 2S 4.1E+02 2.0E+02			7.9E+00	QC : Type:	TotU 2S 4.1E+02	1.5E+02 2.2E+02	7.7E+00	QC Type:	TotU 2S 9.5E+00	QC Type:	TotU 2S 2.8E-01	ne result is been assign
Te	Rpt N	5.7E+01 1.1E+01	or Sdg Nbr: W06843	CntU 2S 3.3E+02	3.4E+01 7.6E+00	or Sdg Nbr W0684 CntU 2S	4.6E+00	or Sdg Nbr	CntU 2S 3.2E+02	1.8E+01 3.3E+01	7.7E+00		CntU 2S 5.4E+00	or Sdg Nbr: W06843	CntU 2S 2.8E-01	for, but the
	on: 05	pCi/L ug/L	SAF Nbr S14-008	Unit pCi/L	pCi/L pCi/L ug/L	SAF Nbr S14-008 Unit C	pCi/L	SAF Nbr S14-008	Unit pCi/L	pCi/L pCi/L	ng/L	SAF Nbr S14-008	Unit pCi/L	SAF Nbr 114-036	Unit pCi/L	knalyzed Vo U qua
	EAD Version:	1.13E+04 8.79E+01	Contract Nbr MW6-SBB-A1	Result 7.26E+03	3.92E+03 6.37E+01	Contract Nbr MW6-SBB-A1 Result	2.53E+01	Contract Nbr MW6-SBB-A1	Result 7.25E+03	1,17E+03 3.94E+03	6.42E+01	Contract Nbr MW6-SBB-A1	Result 3.09E+01	Contract Nbr MW6-SBB-A1	Result 6.27E-01	U Qual - Analyzed for, but the J Qual - No U qualifier has I
	FormatType: FEAD	14133-76-7 7440-61-1	Test User	CAS# 10028-17-8	1230/-41-2 14133-76-7 7440-61-1		12587-46-1	Test User	CAS# 10028-17-8	12587-47-2 14133-76-7	7440-61-1	Test User	CAS# 12587-46-1	Test User	CAS# 15046-84-1	dd v3.48
9/15/2014 2:00:54 PM		Tc-99 Uranium	Client Id: B2X811	Analyte H-3	beta Tc-99 Uranium	Client Id: B2X811 Analyte	Alpha	Client Id: B2X812	Analyte H-3	Beta Tc-99	Uranium	Client Id: B2X812	Analyte Alpha	Client Id: B2X6J3	Analyte I-129	TestAmerica Inc rptFeadRadSummaryEdd v3.48
9/15/20I	FormNbr: R	4227042 4227040	Lab Sample Id: 9M4LQJ10	Batch 4227044	4227042 4227042 4227040	Lab Sample Id: 9M4LQJ30 Batch	4245067	Lab Sample Id: 9M4LQK10	Batch 4227044	4227047 4227042	4227040	Lab Sample Id: 9M4LQK20	Batch 4245067	Lab Sample Id: 9M4MMT10	Batch 4227049	TestAmerica Inc rptFeadRadSu

Page 12 of 137

				September 1	16, 2014
	.p.	Act	Act	Act — — —	Act
Lab Code: TARL	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	Collection Date: 08/12/2014 12:35 Unit Analy Date/Time L 09/06/2014 11:27	Collection Date: 08/12/2014 12:35 Unit Analy Date/Time L 09/06/2014 13:43	Collection Date: 08/12/2014 10:22 Jnit Analy Date/Time L 09/06/2014 13:44 L 08/27/2014 07:22 ML 09/09/2014 08:52	Collection
	oortdb\e	_			08/12 Unit
	343.Edd, h:\Rep	Alq Size 3.8162E+00	Alq Size 3 3.7984E+00	Alq Size 3.8044E+00 1.25E-01 2.53E+01	Alq Size 5.007E-03
	FeadIV\Rad\W06	Sample On Date: Method	Sample On Date: Method 1129LL_SEP_LEPS	Sample On Date: Method Alq Size 1129LL_SEP_LEPS 3.8044E+00 TC99_ETVDSK_LS 1.25E-01 UTOT_KPA 2.53E+01	Sample On Date: Method 906.0_H3_LSC
ort	h:\Reportdb\edd\	illed ume d	Distilled Volume rcYield 93.5	illed	sture/ Distilled ds%: Volume MDA TrcYield M 3.17E+02 100.0 906
America Inc Report	File Name:	Moisture/ Dist Solids%*: Vol N MDA TrcYiel 2.93E-01 90.8	Moisture/ Solids%*: II MDA T 3.19E-01	Mois	Mois
ica		Gual	Qual	Qual	Gual
tAmer	Rpt Nbr: 62283	QC Type: 3 TotU 2S C 4.5E-01	QC Type: 3 TotU 2S C 5.5E-01	QC Type: 3 TotU 2S C 2.7E-01 1.3E+01 1.4E+01	ac Type: 3 TotU 2S (1.6E+02
Test	Rpt N	No Sdg Nbr: W06843 CntU 2S 4.5E-01	Nbr: No6843 W06843 CntU 2S 5.5E-01	r Sdg Nbr: W06843 CntU 2S 2.7E-01 7.5E+00 1.4E+01	r Sdg Nbr: W06843 CntU 2S 1.5E+02
	Version: 05	1 22	- Ω	Ω	Ω
		Contract SAF N Nbr Nbr MW6-SBB-A1 114-036 Result 1.43E+00 PCi/L	Contract SAF N Nbr MW6-SBB-A1 114-036 Result Unit 2.81E+00 pCi/L	Contract SAF N Nbr Nbr MW6-SBB-A1 114-036 Lesult Result Unit 8.14E-01 pCi/L 1.41E+02 pCi/L 1.19E+02 ug/L	Contract SAF N Nbr MW6-SBB-A1 114-036 Result Unit 3.60E+02 pCi/L
M	FormatType: FEAD	Test User CAS# 15046-84-1	Test User CAS# 15046-84-1	Test User CAS# 15046-84-1 14133-76-7 7440-61-1	Test User CAS# 10028-17-8
9/15/2014 2:00:54 PM	ە: ك	Lab Client Sample Id: Id: 9M4MMV10 B2X6M9 Batch Analyte 4227049 I-129	Client: Id: 1 B2X6N0 Analyte 1-129	Lab Client Sample Id: Id: 9M4MMX10 B2X6M3 Batch Analyte 4227049 I-129 4227042 Tc-99	Client Language Description Client Id: 0 B2X6M3 Analyte H-3
9/15/20.	FormNbr:	Lab Sample Id: 9M4MMV10 Batch 4227049	Lab Sample Id: 9M4MMW1 Batch 4227049	Lab Sample Id: 9M4MMX10 Batch 4227049 4227042	Lab Client Sample Id: Id: 9M4MMX20 B2X6M3 Batch Analyte 4248049 H-3

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.

rptFeadRadSummaryEdd v3.48

TestAmerica Inc

Page 13 of 137

Monday. September 15, 2014	#			T Se	tAmer	ica Inc	OC Blan	TestAmerica Inc OC Blank Report			Lab	Lab Code: TARL	4RL
Form\br: R		FormatType:	e: FEAD	; >	VersionNbr:	05	File Name	: h:\Reportdb\e	File Name: h:\Reportdb\edd\Fead\V\Rad\W06843.Edd, h:\Reportdb\edd\Fead\V\Rad\62283.Ed	43.Edd, h:\Repc	ortdb\edd\F	⁻ eadlWRa	d\62283.Ed
<u>.</u>	MANNETOAR) V	Sda/Rept Nhr.	W 06843		62283	Collec	Collection Date:	08/12/2	08/12/2014 10:22	22
	NA NA) E	Matrix:			WATER	Samp	Sample On Date:			
/Solids%*:				ð	QC Type:	BLK			Recei	Received Date:	08/12/2014	:014	
SAF Nbr Contract Nbr MW6-SBB-A19981	t Nbr 3-A19981	Tes	Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume		File Id	LL.	FSuffix RTyp BD H
Batch # / Analyt/ F Qc Type CAS# O 4248049 H-3 BLK 10028-17-8	Result/ Orig Rst 1-3.94E+01 pt	Unit L pCi/L 1	Tot/Cnt Uncert 2S 1.5E+02 1.3E+02	Ou- □ al	MDC 3.29E+02	Tracer Yield 100.0	Spk Conc/ %Rec	Method 906.0_H3_LSC	Aliq Size/ LSC 5.015E-03 L	Date/Time Analyzed 09/08/2014 21:03	NOT NOT	RER/ UCL	LCS R LCL/UCL Typ D
Page 14 d	and and the state of the state of the state of												
√ 127													
	Miles III in March Bearing and March III.												
TestAmerica Inc rptFeadRadEdd v3.68		U Qua J Qual B Qua	I - Analyze - No U qι - Analyte	ed for, ualifier was fe	but the re t has been	sult is less assigned a e associate	than the Mc and the resul d laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual- Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	fy the nuclide CRDL).			I

Monday, September 15, 2014	2014			Te	stAmeri	ca Inc (2C Blan	TestAmerica Inc QC Blank Report			Lal	Lab Code: TARL	rarl
FormNbr: R		FormatT	FormatType: FEAD		VersionNbr:	05	File Name	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	FeadIV\Rad\W068	43.Edd, h:\Repo	ortdb\edd\	FeadIWR	ad\62283.Ed
Lab Sample Id:	M4MR21AB	1AB		S	Sdg/Rept Nbr:	l br: W06843		62283	Colle	Collection Date:	08/13/2	08/13/2014 08:40	:40
Client Id:	¥			2	Matrix:	WATER		WATER	Samp	Sample On Date:			
Moisture/Solids%*:				G	QC Type:	BLK			Recei	Received Date:	08/13/2014	2014	
SAF Nbr Co	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume		File Id	_	FSuffix RTyp BE H
	Result/ Orig Rst		Tot/Cnt Uncert 2S	Qu-	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method		Aliq Date/Time Size/ Analyzed	RPD/ UCL	RER/ UCL	LCS R LCL/UCL Typ
_	1.02E+00		1.5E+00 1.5E+00	⊃ ;	3.02E+00			CO TIMINITY OF		23:49			ם מ
4227045 CS-134 BLK 13967-70-9	9.17E-01	pCi/L	1.8E+00 1.8E+00	-	3.18E+00			GAIMINA_GS		Z.5448E+UU U9/U8/ZU14 L 23:49			۵
LΩ	-5.58E-01	pCi/L	1.4E+00		2.34E+00			GAMMA_GS		2.5448E+00 09/08/2014			Ω
BLK 4227045	-1.29E+00) pCi/L	3.9E+00	⊃	6.74E+00			GAMMA_GS		2.5448E+00 09/08/2014			Ω
b BLK 14683-23-9 6 4227045 FIL-154	2,46E+00	pCi/L	3.9E+00 3.9E+00	⊃	7.96E+00			GAMMA GS	L 2.5448E+00	L 23:49 2.5448E+00 09/08/2014			Ω
BLK	- - -		3.9E+00					1	7	23:49			ſ
4227045	-1.50E+00) pCi/L	3.5E+00	⊃	5.33E+00			GAMMA_GS	2.5448E+00	2.5448E+00 09/08/2014			<u>a</u>
4227045 K-40	-1.04E+02	2 pCi/L	3.5E+00 4.2E+01	رد	8.12E+01			GAMMA_GS	2.5448E+00	2.5448E+00 09/08/2014			Ω
			4.2E+01		!				7	23:49			۵
4227045 SB-125 BIK 14234-35-6	1.95E+00	pCi/L	3.5E+00 3.5E+00	⊃	6.48E+00			GAMIMA_GS	2.5448E+UU L	2.5448E+00 09/08/2014 L 23:49			ב
	m alam to delice to												
	or allow some the sales.										·		
TestAmerica Inc rptFeadRadEdd v3.68		On On	U Qual - Analyzed for, bu	red for,	but the res	sult is less t	han the Md	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).	n did not identil	y the nuclide CRDL).			2

76 1 1 1 2 1 11 12 1						Jun Ino (C Blan	Treat & monitor Inc Of Blank Bonort			Lab	Lab Code: TARL	ARL
Monday, September 13, 2014	714			์ -	StAmeri	Ca THC (C Dian	A Incpute					I
FormNbr: R	F	FormatType:	pe: FEAD	>	VersionNbr:	05	File Name	s: h:\Reportdb\ed	d\FeadIV\Rad\W(File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	ortdb\edd\F	-eadIMRa	d\62283.Ed
Lab Sample Id: Client Id: Moisture/Solids%*:	M4MR41AB NA	m		NEG	Sdg/Rept Nbr: Matrix: QC Type:	Voss43 WATER BLK		62283 WATER	Sa Rec	Collection Date: Sample On Date: Received Date:	* *	08/11/2014 11:26	56
SAF Nbr Contra	Contract Nbr MW6-SBB-A19981	<u> </u>	Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume		File Id	ŭ	FSuffix RTyp BG H
Batch # / Analyt/ Qc Type CAS# 4227047 Beta BLK 12587-47-2	Result/ OrigiRst 1.17E+00	Unit pCi/L	Tot/Cnt Uncert 2S 1.0E+00 1.0E+00	Qu- a al	MDC 1.83E+00	Tracer Yield 100.0	Spk Conc/ %Rec	Method 9310_ALPHAB	Aliq Size/ Size/ HAB 2.017E-01 L	Date/Time Analyzed 1 08/28/2014 08:15	NCL UCL	NEL/ UCL	LCS R LCL/UCL Typ D
TestAmerica Inc rptFeadRadEdd v3.68		U Qu J Qu B Qu	al - Analyz al - No U q al- Analyte	ed for, ualifie	but the re r has been ound in th	sult is less assigned as	than the Mind the resul	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the n J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL) B Qual- Analyte was found in the associated laboratory blank above the MDC.	an did not ide. Reporting Limi he MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	ಪ		, co

Monday, September 15, 2014				Test	stAmer	ica Inc	QC Blan	America Inc QC Blank Report		(- - - 1	[La]	Lab Code: TARL	TARL
FormNbr: R		ormatTy	FormatType: FEAD	-	VersionNbr:	: 05	File Name	h:\Reportdb\edk	File Name: h:\Reportdb\edd\Fead\V\Rad\W06843.Edd, h:\Reportdb\edd\Fead\V\Rad\62283.Ed	43.Edd, h:\Repo	ortdb\edd\	FeadIMR	ad\62283.Ed
Lab Sample Id: Client Id: Moisture/Solids%*:	M4MR51AB NA	<u></u>		0 2 0	Sdg/Rept Nbr: Matrix: QC Type:	Nbr: W06843 WATER BLK	-	62283 WATER	Coller Samp Recei	Collection Date: Sample On Date: Received Date:		08/13/2014 11:13	:13
SAF Nbr Contract Nbr MW6-SBB-A1	Contract Nbr MW6-SBB-A19981	Te	Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume		File Id		FSuffix RTyp BI H
Batch # / Analyt/ Qc Type CAS# 4227048 Sr-89/90 BLK SR-RAD 814 of 14 of	Result/Orig-Rst	Unit pCi/L	Tot/Cnt Uncert 2S 2.0E-01 2.0E-01	Qui	MDC 4.49E-01	Tracer Yield 91.7	Spk Conc/ %Rec	Analy Method SRTOT_SEP_		Aliq Date/Time Size/ Analyzed 1.0053E+00 09/08/2014	NCC UCC	RER/ UCL	LCL/UCL Typ
TestAmerica Inc		UQu	al - Analyz	ed for	but the r	esult is less	than the Md	c or gamma sc	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.	y the nuclide			4
rptFeadRadEdd v3.68		J Qu B Qu	al - No U q al- Analyto	tualific e was 1	r has been found in tl	ı assigned a ıe associate	nd the resun d laboratory	J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual- Analyte was found in the associated laboratory blank above the MDC.	J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.	CKDL).			

: TARL	√Rad\62283.Ed	10:57	FSuffix RTyp BK H	LCL/UCL Typ D	
Lab Code: TARL	rtdb\edd\Feadl\	08/12/2014 10:57	<u> </u>	RED/ UCL UCL	
	3.Edd, h:\Repo	Collection Date: Sample On Date: Received Date:	File Id	Date/Time Analyzed 09/06/2014 16:31	
	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	Collec Sampl Receiv	Distilled Volume	Aliq Date/Time Size/ Analyzed 2_L 3.5707E+00 09/06/2014 L 16:31	
TestAmerica Inc QC Blank Report	e: h:\Reportdb\edc	62283 WATER	Decant	Method I129LL_SEP_L	
QC Blan	File Name		Suffix	Spk Conc/ %Rec	
ica Inc (: 05	Nbr: W06843 WATER BLK	SAS Nbr	Tracer Yield 93.8	
TestAmer	VersionNbr:	Sdg/Rept Nbr: Matrix: QC Tvpe:	5	Qu- al MDC U 3.11E-01	
	FormatType: FEAD		Test User Ca	Tot/Cnt Uncert 2S 2.2E-01 2.2E-01	
114	Format	M4MR61AB NA	Contract Nbr MW6-SBB-A19981	Result/ Orig Rst Unit -9.21E-02 pCi/L	
Monday, September 15, 2014	FormNbr: R	ple Id:	lbr Contra	Analyt CAS# 1-129 - 15046-84-1	
Monday,	ш.	Lab Sam Client Id:	SAF Nbr	Batch # / Qc Type 4227049 BLK	

16. 1 1 Canton 15. 7	014			E	4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	In C	C Dlank	Treath menion Inc Of Plant Donout			Lab	Lab Code: TARL	ARL
Monday, September 13, 2014	* * * * * * * * * *			ר	Stametr	Z III EN	C Diams	nepont					
FormNbr: R		FormatType:	ype: FEAD	-	VersionNbr:	05	File Name:	h:\Reportdb\edd	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	43.Edd, h:\Repo	rtdb\edd\F	eadIMRa	d\62283.Ed
Lab Sample Id:	M4MRM1AB	AB		S	Sdg/Rept Nbr:	br: W06843		62283	Colle	Collection Date:	08/11/2014 12:57	014 12:	22
Client Id:	- K			2	Matrix:			WATER	Samp	Sample On Date:			
Moisture/Solids%*:				9	QC Type:	BLK			Recei	Received Date:	08/11/2014	014	
SAF Nbr Contr	Contract Nbr MW6-SBB-A19981		Test User	Case Nb		SAS Nbr	Suffix	Decant	Distilled Volume	File Id	p] q	LL.	FSuffix RTyp BM H
Batch # / Analyt/ Qc Type	Result/Orig Rst	Unit	Tot/Cnt Uncert 2S 2.9E-03 2.9E-03	og a □	MDC 7.91E-02	Tracer Yield	Spk Conc/ %Rec	Analy Method UTOT_KPA	Aliq Size/ 2.65E+01 ML	Date/Time Analyzed 09/09/2014 09:01	ncF,	UCL UCL	LCS R LCL/UCL Typ D
											· · · · · · · · · · · · · · · · · · ·		
TestAmerica Inc rptFeadRadEdd v3.68		n O f B Qu	ual - Analyz tal - No U q tal- Analyt	ed for ualifie e was f	but the restrans has been a cound in the	ult is less the signed an associated	han the Mdc d the result laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	fy the nuclide. CRDL).			9

Mondan Contambor 15 2	017				A to the state of	Jour soi	V Rlank	Tout Amorios Inc OC Blank Benort			Lab	Lab Code: TARL	ARL
Monday, September 15, 2014				<u>ئ</u> -	MATTER	וכמ וווכ ל	2 Diam	a inchoir			_,		**
FormNbr: R	L ie	FormatType:	rpe: FEAD	>	VersionNbr:	05	File Name:	: h:\Reportdb\ed	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	343.Edd, h:\Repoi	rtdb\edd\F	-eadIMRa	ld\62283.Ed
Lab Sample Id:	M4MRQ1AB	Ą.		Ñ	Sdg/Rept Nbr:	Nbr: W06843		62283	Colle	Collection Date:	08/13/2	08/13/2014 10:45	45
Client Id:	¥			Σ	Matrix:	WATER		WATER	Sam	Sample On Date:			
Moisture/Solids%*:				ď	QC Type:	BLK			Rece	Received Date:	08/13/2014	2014	
SAF Nbr Contr	Contract Nbr MW6-SBB-A19981	 - 	Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume	File Id	<u> </u>	ш.	FSuffix RTyp BP H
Batch # / Analyt/ Qc Type CAS# 4227041 C-14 BLK 14762-75-5	Result/ Orig Rst 5.35E+00	Unit pCi/L	Tot/Cnt Uncert 2S 8.8E+00 7.5E+00	Qu- al al	MDC 1.75E+01	Tracer Yield 100.0	Spk Conc/ %Rec	Analy Method C14_LSC	Aliq Size/ 7.50E-02 L	Date/Time Analyzed 09/10/2014 13:49	RPD/ UCI	RER/ UCL	LCS R LCL/UCL Typ D
Page 20 of 137													
TestAmerica Inc rptFeadRadEdd v3.68		U Qu J Qu B Qu	nal - Analyz al - No U q tal- Analyte	ed for, ualifie	but the re r has been ound in th	ssult is less t assigned an e associated	han the Md id the result laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	ify the nuclide. CRDL).			7

										Tab Codo: TARI	ā
Monday, September 15, 2014	014		TestAme	rica In	TestAmerica Inc QC Blank Report	k Report			Lan Lan	Cone:	1
FormNbr: R		FormatType: FEAD	VersionNbr: 05	ır: 05	File Name	e: h:\Reportdb\ed	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	13.Edd, h:\Repor	tdb\edd\F	eadIV/Rac	N62283.Ed
l ah Sample Id:	M4MRW1AB	AB	Sdg/Rept Nbr:		W06843	62283	Collec	Collection Date:	08/11/20	08/11/2014 10:39	တ္ဆ
Client Id:	¥		Matrix:		WATER	WATER	Samp	Sample On Date:			
Moisture/Solids%*:			QC Type:		BLK		Receiv	Received Date:	08/11/2014	014	
SAF Nbr Contt	Contract Nbr MW6-SBB-A19981	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	PI	<u>R</u>	FSuffix RTyp BR H
Batch # / Analyt/ Qc Type CAS# 4227042 Tc-99 BLK 14133-76-7	Result/ Orig Rst 1.19E+00	Tot/Cnt Unit Uncert 2S pCi/L 5.1E+00 3.9E+00	Qu- al MDC U 9.41E+00	Tracer Yield 00 100.0	r Spk Conc/ %Rec	/ Analy Method TC99_ETVDSK	Aliq Size/ DSK 1.275E-01 L	Date/Time Analyzed 08/27/2014 09:27	RPD/ UCL	RER/ UCL	LCS R LCL/UCL Typ D
Page 21 of 137											
TestAmerica Inc rptFeadRadEdd v3.68		U Qual - Analy J Qual - No U B Qual- Analy	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual- Analyte was found in the associated laboratory blank above the MDC.	result is k en assigne the associ	ess than the Mod and the resulated laboratory	de or gamma se It is below the I y blank above t	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.	y the nuclide. CRDL).			∞

					., <u>α</u>	
TARL		ad\62283.Ed	:26	FSuffix RTyp BT H	LCS R LCL/UCL Typ	6
Lab Code: TARL		\\Fead\\\R	08/11/2014 11:26 08/11/2014		NGL NGL	
1		tdb\edc	08/11	<u> </u>	UCL	
		3.Edd, h:\Repor	Collection Date: Sample On Date: Received Date:	File Id	Date/Time Analyzed 09/06/2014 18:17	the nuclide. RDL).
		adIV\Rad\W06843	Collect Sampl Receiv	Distilled Volume	Aliq Size/ 2.013E-01 L	did not identify orting Limit (C MDC.
Donout	Neport	File Name: h:\Reportdb\edd\Fead V\Rad\W06843.Edd, h:\Reportdb\edd\Fead V\Rad\62283.Ed	62283 WATER	Decant D	Analy 9310_ALPHAB	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.
OC DISI.	TestAmerica Inc QC biank report	File Name:	843 ER	Suffix	Spk Conc/ %Rec	than the Mdc and the result i
))	ca Inc	05		SAS Nbr	Yield 100.0	ault is less assigned a
4 4	tAmeri	VersionNbr:	Sdg/Rept Nbr: Matrix: QC Type:		MDC 7.02E-01	but the res has been s
E	Tes	×	S N S	Case Nbr		ed for, ualifier e was fo
		/pe: FEAD		Test User	Tot/Cnt Uncert 2S 3.6E-01 3.6E-01	ual - Analyz ial - No U q ial- Analyt
		FormatType:		-	Unit pCi/L	TO T
7.10	,014	11.	M4T761AB NA	Contract Nbr MW6-SBB-A19981	Result/Orig Rst	
	Monday, September 13, 2014	FormNbr: R	Lab Sample Id: Client Id: Moisture/Solids%*:	Nbr Cont	Analytl CAS# Alpha 12587-46-1	TestAmerica Inc rptFeadRadEdd v3.68
,	Monday,		Lab Clier Mois	SAF Nbr	Batch # / Qc Type 4245067 BLK BLK	TestAmerica Inc rptFeadRadEd

Monday, September 15, 2014	4		TestAmerica Inc OC Control Sample Report	16 OC C	ontrol S	ample Rel	port		Lab (Lab Code: TARL	4RL
FormNbr: R		FormatType: FEAD	VersionNbr: 05	90	File Name	: h:\Reportdb\ed	File Name: h:\Reportdb\edd\Fead\VRad\W06843.Edd, h:\Reportdb\edd\Fead\VRad\62283.Ed	3.Edd, h:\Repo	rtdb\edd\Fe	ead!WRa	d\62283.Ed
Lab Sample Id: Client Id: Moisture/Solids%*;	M4MR11CS NA	S	Sdg/Rept Nbr: Matrix: QC Type:	Nbr: W06843 WATER BS		62283 WATER	Collection Sample Receiv	Collection Date: Sample On Date: Received Date:	08/12/2014 10:22	014 10::)14	55
SAF Nbr Contract Nbr MW6-SBB-A1	Contract Nbr MW6-SBB-A19981	Test User	Case Nbr SA	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	P.	Ĭ.	FSuffix RTyp BC H
Batch # / Analyt Qc Type CAS# 4227044 H-3 BS 10028-17-8 BS 10028-17-8	Result/ Orig Rst 2.69E+03	Tot/Cnt Unit Uncert 28 pCi/L 2.6E+02 2.3E+02	Qu- 3.59E+02	Tracer Yield 100.0	Spk Conc/ %Rec 2.70E+03 99.5	Analy Method 906.0_H3_LSC	Aliq Size/ 5.002E-03 L	Date/Time Analyzed 08/19/2014 12:25	UCI NOT	UCL UCL	LCL/UCL Typ 70 D 130
TestAmerica Inc rptFeadRadEdd v3.68		U Qual - Analyzed for, bu J Qual - No U qualifier ha B Qual - Analyte was four	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the n J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL) B Qual - Analyte was found in the associated laboratory blank above the MDC.	ssult is less assigned a e associated	than the Md nd the result d laboratory	le or gamma se t is below the I	t the result is less than the Mdc or gamma scan did not identify the nuclide. as been assigned and the result is below the Reporting Limit (CRDL). In the associated laboratory blank above the MDC.	y the nuclide TRDL).			10

Monday Contombor 15 2011			ot A monit	J val or	Ontro	Tout Amorica Inc OC Control Sample Report	nort			Lab C	Lab Code: TARL	굯	
Monday, Depremoer 13, 201			Version	VersionNhr. 05	File N	III OI Saimpro Information (1908) Eile Name: h:\Reportdb\edd\Fead\Wad\62283.Ed	dd\Fead!\\Rad	\W06843.Ed	d, h:\Report	tdb\edd\Fe	ad!WRad	62283.Ec	0
FormNor: K	Ď.	matriye.											
Lab Sample Id:	M4MR21CS		Sdg/F	Sdg/Rept Nbr:	W06843	62283	•	Collection Date:		08/13/2014 08:40	14 08:4	0	
	- A		Matrix:	ÿ	WATER	WATER		Sample On Date:		·· · ·			
Moisture/Solids%*:			QC Type:	ype:	BS			Received Date:		08/13/2014	14		
SAF Nbr Contract Nbr MW6-SBB-A1	Contract Nbr MW6-SBB-A19981	Test User	Case Nbr	SAS Nbr	r Suffix	Decant	Distilled Volume	olume	File Id		Σ.	FSuffix RTyp BF H	ry ⊥
Batch # / Analyt/ Qc Type CAS# CAS# CAS# CAS# CAS# CAS# BS 10198-40-0 4227045 CS-137 BS 10045-97-3 BS 14683-23-9 BS 14683-23-9 BS 14683-23-9	Result Orig Rst 3.49E+01 p 7.43E+01 p	Tot/Cnt Unit Uncert 28 pCi/L 7.5E+00 7.5E+00 pCi/L 6.5E+00 6.5E+01 1.5E+01 1.5E+01	Au- al 3.52 3.77 8.85	3.52E+00 3.77E+00 8.85E+00	Yield %Rec 3.16E+01 110.2 3.99E+01 86.2 6.13E+01 121.2	onc/ Analy Method 601 GAMIMA_GS 601 GAMIMA_GS 601 GAMIMA_GS		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Date/Time Analyzed 9/08/2014 23:49 9/08/2014 23:49 23:49	UCL 	UCL L	LCL/UCL 70 70 70 70 70 130 70 130 130 130 130 130 130 130 130 130 13	7
TestAmerica Inc rptFeadRadEdd v3.68		U Qual - Analy J Qual - No U o B Qual- Analy	zed for, but qualifier has	the result s been assig I in the ass	is less than the gned and the r	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	scan did not Reporting L the MDC.	identify the imit (CRD	te nuclide.				11

Monday, September 15, 2014	4		Test	Ame	rica In	C QC C	ontrol S:	TestAmerica Inc QC Control Sample Report	sport		La La	Lab Code: TARL	ARL
FormNbr: R		FormatType: F	FEAD	Ve	VersionNbr:	05	File Name	: h:\Reportdb\e	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	343.Edd, h:\Repo	ortdb\edd'	FeadIVIR	ld\62283.Ed
Lab Sample Id: MClient Id: NClient Id: NCl	M4MR41CS NA	Ñ		Sdg Mat	Sdg/Rept Nbr: Matrix: QC Type:	br: W06843 WATER BS		62283 WATER	Colle Sam Rece	Collection Date: Sample On Date: Received Date:		08/11/2014 11:26	26
SAF Nbr Contract Nbr MV6-SBB-A1	Contract Nbr MW6-SBB-A19981	Test User		Case Nbr	;	SAS Nbr	Suffix	Decant	Distilled Volume		File Id		FSuffix RTyp BH H
Batch # / Analyt/ Qc Type CAS# CAS# CAS# 1227047 Beta 1. BS 12587-47-2 BS 12587-47-2	Result/ Orig Rst 1.80E+01	Tot/Cnt Unit Uncert 28 pCi/L 2.9E+00 1.7E+00	Tot/Cnt Uncert 28 2.9E+00 1.7E+00	요 =	MDC 1.95E+00	Tracer Yield 100.0	Spk Conc/ %Rec 2.23E+01 80.7	Analy Method 9310_ALPHAB	Alia Size/ Size/ PHAB 2.019E-01 L	Date/Time Analyzed 08/28/2014 11:47	UCIL UCIL	NCL UCL	LCS R 10 LCL/UCL Typ 70 D 130
TestAmerica Inc rptFeadRadEdd v3.68		U Qual - £ J Qual - B B Qual - A	Analyze No U qu Analyte	d for, k talifier was for	out the red has been and in the	sult is less a assigned as associated	than the Mo nd the resul I laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual- Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.	ify the nuclide (CRDL).	d;		12

Page 25 of 137

					1	7	-	ן מ	400 0 00			Lab Code: TARL	TARL	
Monday, September 15, 2014	2014	•	I estA	mer	ica II	つつかい	ontrol	TestAmerica Inc QC Control Sample Neport	hore					
FormNbr: R		FormatType: FEAD	AD	Vers	VersionNbr: 05	05	File Name	h:\Reportdb\ec	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	/06843.Edd, h.	:\Reportdt	\edd\FeadI\	\Rad\62283.E	p
Lab Sample Id: Client Id:	M4MR51CS NA	Š		Sdg/Re Matrix:	Sdg/Rept Nbr: Matrix:	-		62283 WATER	ŏ й i	Collection Date: Sample On Date:		08/13/2014 11:13	11:13	
Moisture/Solids%*:				သွ	QC Type:	BS			** 	Received Date:		13/2014	<u> </u>	
SAF Nbr Cont	Contract Nbr MW6-SBB-A19981	Test User		Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume	nme	File Id		FSuffix KIYP BJ H	g I
Batch # / Analyt/ Qc Type CAS# 4227048 Sr-89/90 BS SR-RAD	Result/ Orig Rst 7.27E+00	Tot/Cnt Unit Uncert 2S pCi/L 1.8E+00 6.3E-01	.	Qu- al 4.6	MDC 4.69E-01	Tracer Yield 94.2	Spk Conc/ %Rec 6.83E+00 106.5	Analy Method SRTOT_SEP_	1	Aliq Date/Time Size/ Analyzed 1.0007E+00 09/08/2014 L 22:19		RPD/ RER/ UCL UCL	LCS LCL/UCL 70 130	™ . O
Page 26 of 137	·													
TestAmerica Inc rptFeadRadEdd v3.68		U Qual - Ar J Qual - No B Qual- An	nalyzed U qua	for, bu lifier h as fou	ut the re us been nd in th	ssult is less assigned a	than the Mc nd the resul d laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual- Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.	entify the mait (CRDL).	uclide.			13

	-			-		(-	-				Lab Code: TARL	ARL
Monday, September 15, 2014	014		Les	tAm	erica In	こうつ	ontrol Sa	TestAmerica Inc QC Control Sample Report	port				
FormNbr: R		FormatType:	e: FEAD	>	VersionNbr:	05	File Name:	h:\Reportdb\e	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	6843.Edd, h:\Rep	ortdb\edd	\FeadI\\R	ad\62283.Ed
l ah Samula Id	M4MR61CS	SS		Ň	Sda/Rept Nbr:	lbr: W06843		62283	Coll	Collection Date:	08/12/	08/12/2014 10:57	257
Client Id:	\ \ Z)):		Σ	Matrix:			WATER	San	Sample On Date:			
Moisture/Solids%*:				ď	QC Type:	BS			Rec	Received Date:	08/12/2014	/2014	
SAF Nbr Cont	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume		File Id		FSuffix RTyp BL H
Batch # / Analyt/ Qc Type CAS# 4227049 I-129 BS 15046-84-1	Result/Orig Rst	DOI/L	Tot/Gnt Uncert 2S 1.2E+00 1.2E+00	Qu le	3.72E-01	Tracer Yield 94.9	Spk Conc/ %Rec 1.08E+01 90.9	Analy Method I129LL_SEP_L		Aliq Date/Time Size/ Analyzed 3.6116E+00 09/06/2014 L 16:31	NCF UCF	NCL UCL	LCS R LCL/UCL Typ 70 D 130
TestAmerica Inc rptFeadRadEdd v3.68		U Quz J Qua B Qua	ul - Analyza I - No U qu ul- Analyte	ed for, ualifie	but the re r has been ound in the	sult is less that assigned an	han the Mde id the result laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.	tify the nuclide (CRDL).	di		14

Monday, September 15, 2014	014		Tes	tAm	erica Inc	OC Co	introl Sai	TestAmerica Inc OC Control Sample Report	ort		Ta	Lab Code: T	TARL
FormNbr: R		FormatType:	Ш		VersionNbr:	05	File Name:	h:\Reportdb\edd\	File Name: h:\Reportdb\edd\Fead\VRad\W06843.Edd, h:\Reportdb\edd\Fead\VRad\62283.Ed	43.Edd, h:\Repoi	rtdb\edd\	FeadIMRa	d\62283.Ed
l ah Sample Id	M4MRM1CS	CS		ု	Sdq/Rept Nbr:	br: W06843		62283	Collec	Collection Date:	08/11/	08/11/2014 12:57	57
Clion* Id:	ΔN) }		2	Matrix:			WATER	Samp	Sample On Date:			
Moisture/Solids%*:				: O	QC Type:	BS			Recei	Received Date:	08/11/2014	2014	
SAF Nbr Contr	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume	File Id	P P	ш	FSuffix RTyp BN H
Batch # / Analyt/ Qc Type CAS# 4227040 Uranium BS 7440-61-1	Result/ Orig Rst 3.27E+01	Unit ug/L	Tot/Cnt Uncert 2S 3.9E+00 3.9E+00	Qr.	MDC 7.57E-02	Tracer Yield	Spk Conc/ %Rec 3.33E+01 98.2	Analy Method UTOT_KPA	Aliq Size/ 2.77E+01 ML	Date/Time Analyzed 09/09/2014 09:03	RPD/ UCL	RER/ UCL	LCS R LCL/UCL Typ 70 D 130
Pag	<u> </u>										······································		
e 28 of 137	<u> </u>												
											-		
TestAmerica Inc rptFeadRadEdd v3.68		u Qu J Qu B Qu	tal - Analyz al - No U q tal- Analyte	ed for ualifie e was f	but the res r has been a found in the	ult is less the signed an associated	han the Mdc d the result i laboratory b	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.	fy the nuclide. CRDL).			15

	-				,	0		-			[,ab	Lab Code: TARL	4RL
Monday, September 15, 2014	5014		Tesi	tAm	erica Inc	ごつつ	ontrol Sal	TestAmerica Inc QC Control Sample Keport	0rt				
FormNbr: R	- Anne FAn	FormatType: FEAD	e: FEAD	>	VersionNbr:	05	File Name:	h:\Reportdb\edd\	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	43.Edd, h:\Repoi	rtdb\edd\F	-eadIV/Ra	1/62283.Ed
Lab Sample Id:	M4MRM1DS	DS		Ň	Sdg/Rept Nbr:	or: W06843		62283	Collec	Collection Date:	08/11/2	08/11/2014 12:57	22
Client Id:				Σ	Matrix:	WATER		WATER	Samp	Sample On Date:			
Moisture/Solids%*;	 			Ø	QC Type:	BS			Recei	Received Date:	08/11/2014	2014	
SAF Nbr Cont	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr	Nbr SAS Nbr	Nbr	Suffix	Decant	Distilled Volume	File Id	P.	Ľ	FSuffix RTyp BO H
Batch # / Analyt/ Qc Type CAS# 4227040 Uranium BS 7440-61-1 BS 7440-61-1	Result/Orig Rst	Unit ug/L	Tot/Cnt Uncert 28 3.6E-01 3.6E-01	a la	MDC 8.15E-02	Tracer Yield	Spk Conc/ %Rec 3.52E+00 99.3	Analy Method UTOT_KPA	Aliq Size/ 2.57E+01 ML	Date/Time Analyzed 09/09/2014 09:05	UCL NCC	UCL	LCS R 1CL/UCL Typ 70 D 130
TestAmerica Inc rptFeadRadEdd v3.68		U Qui J Qua B Qua	ıl - Analyze I - No U qu I- Analyte	ed for, ualified was f	but the rest r has been a ound in the	ult is less thesigned and associated	nan the Mdc d the result is laboratory b	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	fy the nuclide.			16

Monday, September 15, 2014	2014		Tes	itAm	erica Ir	1c OC C	ontrol Sa	TestAmerica Inc OC Control Sample Report	ort		<u> </u>	Lab Code: TARL	ARL
FormNbr: R		FormatT	FormatType: FEAD		VersionNbr: 05	05	File Name:	n:\Reportdb\edα	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	43.Edd, h:\Repc	ortdb\edc	d∖FeadIV∖R	ad\62283.Ed
	M4MRO1CS	710.8			Sda/Rept Nbr:	Vbr: W06843		62283	Collec	Collection Date:	08/13	08/13/2014 10:45	:45
Client Id:	Y X	2		, 2	Matrix:			WATER	Samp	Sample On Date:			
Moisture/Solids%*:				J	QC Type:	BS			Recei	Received Date:	08/13	08/13/2014	
SAF Nbr Con	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume	File Id	p 0	_	FSuffix RTyp BQ H
Batch # / Analyt/ Qc Type CAS# 4227041 C-14 BS 14762-75-5 Batch # / Analyt/ BS 14762-75-5	Result Orig Rst 4.88E+02	Unit 2 pCi/L	Tot/Cnt Uncert 2S 3.3E+01 1.7E+01	ਸੂ <mark>ਲ</mark>	MDC 1.74E+01	Tracer Yield 100.0	Spk Conc/ %Rec 4.91E+02 99.4	Analy Method C14_LSC	Aliq Size/ 7.50E-02 L	Date/Time Analyzed 09/10/2014 14:52	UCL	UCL NCL	LCS R LCL/UCL Typ 70 D 130
TestAmerica Inc rptFeadRadEdd v3.68		D D D D D D D D D D D D D D D D D D D	ual - Analyz ıal - No U q ual- Analyt	red for qualific e was f	; but the re er has been found in th	sult is less t assigned at e associated	than the Mdd and the result I laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	fy the nuclide CRDL).			17

Monday, September 15, 2014	3014		Tes	tAmer	ica In	2 OC C	ontrol S	TestAmerica Inc OC Control Sample Report	eport			Lab	Lab Code: TARL	4RL
E CrawNier		FormatTv	FormatTvne: FEAD	Vers	VersionNbr:	05	File Name	File Name: h:\Reportdb\edd\Fead\VRad\W06843.Edd, h:\Reportdb\edd\Fead\VRad\62283.Ed	₃dd\Feadl\	/\Rad\W0684	3.Edd, h:\Repo	ortdb\edd\F	-eadlWRa	d\62283.Ed
Pri Ciamo de la	SOLVADIAL S	7400) DOS	Sda/Rent Nhr.	br. W06843	843	62283		Collect	Collection Date:	08/11/2	08/11/2014 10:39	39
Lab Sample ld: Client ld:	A A A	2		Matrix:	rix:			WATER		Sampl	Sample On Date:			
Moisture/Solids%*:				၁၀	QC Type:	BS				Receiv	Received Date:	08/11/2014	2014	
SAF Nbr Cont	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr		SAS Nbr	Suffix	Decant	Disti	Distilled Volume	Fig	File Id	L.	FSuffix RTyp BS H
Batch # / Analyt/ Qc Type CAS# 4227042 Tc-99 BS 14133-76-7	Result Orig Rst 5.73E+02	Doill	Tot/Cnt Uncert 2S 3.6E+01 1.3E+01	الا	MDC 9.35E+00	Tracer Yield 100.0	Spk Conc/ %Rec 5.43E+02 105.4	Method TC99_ETVDSK		Alia Size/ 1.282E-01	Date/Time Analyzed 08/27/2014 10:29	UCI.	UCL	LCS R TCL/UCL Typ 70 D 130
TestAmerica Inc rptFeadRadEdd v3.68	-	D I O I	U Qual - Analyz J Qual - No U q B Qual- Analyt	ed for, bu ualifier h	at the restant been and in the	sult is less assigned a associate	than the Mand the result dispersion of the dispersion.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual- Analyte was found in the associated laboratory blank above the MDC.	scan did Reporti	not identify ng Limit (C C.	the nuclide RDL).	4		18

	W 11									-		
Monday, September 15, 2014	914	Te	stAn	nerica L	ne QC C	ontrol Sa	TestAmerica Inc QC Control Sample Report	port		Lab —	Lab Code: TAKL	AK!
FormNbr: R		FormatType: FEAD		VersionNbr:	05	File Name:	h:\Reportdb\ec	File Name: h:\Reportdb\edd\Fead\WRad\W06843.Edd, h:\Reportdb\edd\Fead\WRad\62283.Ed	843.Edd, h:\Repor	tdb\edd\F	-eadIMRa	d\62283.Ed
Lab Sample Id: Client Id:	M4T761CS NA	SS	0, 2	Sdg/Rept Nbr: Matrix:			62283 WATER	Colli	Collection Date: Sample On Date:	08/11/2014	08/11/2014 11:26	26
re/Solid		Tool lear	OC T	ype	SS BS	Suffix	Decant	Necel Necel Distilled Volume	ved Date.			FSuffix RTyp
SAF Nbr Contr MW6-S	Contract Nbr MW6-SBB-A19981	lest User	Case			Y Control						BU H
Batch # / Analyt/ Qc Type CAS# 4245067 Alpha BS 12587-46-1 BS 12587-46-1	Result/Orig Rst	Tot/Cnt Unit Uncert 2S pCi/L 5.4E+00 1.6E+00	O a a	MDC 7.84E-01	Tracer Yield 100.0	Spk Conc/ %Rec 2.34E+01 88.1	Analy Method 9310_ALPHAB	Aliq Size/ Size/ HAB 2.014E-01 L	Date/Time Analyzed 09/06/2014 18:17	UCL NCCI	NCL UCL	LCS R LCL/UCL Typ 70 D 130
TestAmerica inc rptFeadRadEdd v3.68	-	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	zed for qualifi e was	; but the reer has beer found in the	esult is less t assigned an	than the Md nd the result I laboratory	c or gamma s is below the blank above	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	tify the nuclide. (CRDL).			19

Mondon, Contombor 15 2014	2014			Toot	\ morios	The OC	Dunlies	Tost America Inc OC Dunlicate Renort	\ _		Lab	Lab Code: TARL	ARL
Troining, September 15,	-	ļi L	ר ר		Conjective)	Eilo Namo.	h-\Renortdh\ed	Eile Name: h:Renortdheddleadll/Rad(W)06843.Edd. h:\Reportdb\edd\FeadlV\Rad\62283.Ed	843.Edd. h:\Repor	rtdb\edd\F	-eadIMRa	d\62283.Ed
FormNbr: K	-	Format I ype:	pe: rEAU		Versionindir		The Manne	ni Nepolicabila					
Lab Sample Id:	M4L8C1GR	Ä		S	Sdg/Rept Nbr:	Jbr: W06843		62283	Colle	Collection Date:	08/13/2	08/13/2014 10:45	45
Client Id:	B2X632			Ξ	Matrix:	WATER		WATER	Sam	Sample On Date:			
Moisture/Solids%*:				Ø	QC Type:	DUP			Rece	Received Date:	08/13/2014	014	
SAF Nbr Con 114-035 MW6	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume	File Id	<u>p</u>	IĽ	FSuffix RTyp AR H
Batch # / Analyt/ Qc Type	Result/ Orig Rst 7.49E+02 7.26E+02	DOI/I	Tot/Cnt Uncert 2S 4.7 E+01 2.0 E+01	Q = E	MDC 1.75E+01	Tracer Yield 100.0	Spk Conc/ %Rec	Analy Method C14_LSC	Aliq Size/ 7.50E-02 L	Date/Time Analyzed 09/10/2014 09:35	8.2 20.0 20.0	0.7 3 3	LCL/UCL Typ D
TestAmerica Inc rptFeadRadEdd v3.68	-	U Qu J Qui B Qu	al - Analyz ıl - No U q al- Analyto	ed for, ualifie e was f	but the re r has been ound in th	sult is less t assigned an e associated	han the Md of the result laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	ify the nuclide. (CRDL).			20

13966-00-2

DUP

X-40

4227045

14391-16-3

DUP

10198-40-0

DUP

0900

4227045

Batch # /

Qc Type

Lab Sample Id:

Client Id:

SAF Nbr 114-035

FormNbr:

13967-70-9

DUP

CS-134

4227045

CS-137

4227045

10045-97-3

DUP

EU-152

4227045

14683-23-9

15585-10-1

EU-154

EU-155

14234-35-6

DUP

SB-125

1227045

rptFeadRadEdd v3.68 TestAmerica Inc

										:	H	ī
Monday, September 15, 2014	2014		TestAm	erica	Inc QC	Duplica	merica Inc QC Duplicate Report			Lab	Lab Code: IAKL	
FormNbr: R	_	FormatType: FEAD	Versi	VersionNbr:	05	File Name:	h:\Reportdb\edd	File Name: h:\Reportdb\edd\Fead\V\Rad\W06843.Edd, h:\Reportdb\edd\Fead\V\Rad\62283.Ed	3.Edd, h:\Repo	rtdb\edd\F	eadIWRa	d\62283.Ed
	M4L8Q1FR B2X680	ıς.	Sdg/Re Matrix:	Sdg/Rept Nbr: Matrix:			62283 WATER	Collec	Collection Date: Sample On Date:	08/13/2	08/13/2014 11:13	13
Moisture/Solids%*:			QC Type:	ype:	DUP			Recei	Received Date:	08/13/2014		
SAF Nbr Cont 114-035 MW6-	Contract Nbr MW6-SBB-A19981	Test User	Case Nbr	SAS	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	프	ĬĽ	FSuffix RTyp AT H
Batch # / Analyt/ Qc Type CAS# 4227048 Sr-89/90 DUP SR-RAD	Result Orig Rst -1.62E-01 1.42E-02	Tot/Cnt Unit Uncert 28 pCi/L 1.6E-01 1.5E-01	A 4.17	MDC 4.17E-01	Tracer Yield 100.0	Spk Conc/ %Rec	Analy Method SRTOT_SEP_	Aliq Size/ Size/ - 1.008E+00	Date/Time Analyzed 09/08/2014 22:19	20.0 20.0	1.6 3	LCS R LCL/UCL Typ D
TestAmerica Inc rptFeadRadEdd v3.68		U Qual - Anah J Qual - No U B Qual- Anah	zed for, but qualifier ha te was foun	t the res is been a	ault is less tassigned at associated	than the Md nd the result d laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	y the nuclide CRDL).			22

												Sab Code: TARI	ARI
Monday, September 15, 2014	914		. '	FestA	merica	Inc QC	Duplica	TestAmerica Inc QC Duplicate Report		,	i		[
FormNbr: R	<u></u>	-ormatTy _s	FormatType: FEAD	\ Ve	VersionNbr:	05	File Name:	h:\Reportdb\edd	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	43.Edd, h:\Repo	rtdb\edd	/FeadIWRa	ld\62283.Ed
l ah Samnle Id	M4I OD1DR	\ \overline{\pi}		Sd	Sda/Rept Nbr:	or: W06843		62283	Colle	Collection Date:	08/11/	08/11/2014 12:57	57
Client Id:	R2X7Y1	, :		M	Matrix:	WATER		WATER	Sam	Sample On Date:			
Moisture/Solids%*:				ğ	QC Type:	DUP			Recei	Received Date:	08/11/2014	2014	
SAF Nbr Contra S14-008 MW6-S	Contract Nbr MW6-SBB-A19981	Te	Test User	Case Nbr	br SAS Nbr	Nbr	Suffix	Decant	Distilled Volume	File Id	<u> </u>	ш.	FSuffix RTyp AU H
Batch # / Analyt/ Qc Type CAS# 4227040 Uranium DUP 7440-61-1	Result/ Orig Rst 1.55E+01 1.54E+01	Unit ug/L	Tot/Cnt Uncert 2S 1.8E+00 1.8E+00	Qu- al 7.	MDC .48E-02	Tracer Yield	Spk Conc/ %Rec	Analy Method UTOT_KPA	Aliq Size/ 2.80E+01 ML	Date/Time Analyzed 09/09/2014 08:29	RPD/ UCL .4 .20.0	RER/ UCL 0.1	LCS R LCL/UCL Typ D
Dogo 26 of 427													
TestAmerica Inc rptFeadRadEdd v3.68		U Qu J Qui B Qu	U Qual - Analyzed for, k J Qual - No U qualifier B Qual- Analyte was for	ed for, lualifier	but the results but the und in the	ult is less t ssigned ar associated	han the Mdd Id the result Iaboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	fy the nuclide CRDL).			23

7			E		1.0	D. L.	oto Donor	4		La	Lab Code: TARL	ARL
Monday, September 15, 2014	2014		ð T	stAmeric	a Inc C	c pupite	TestAmerica inc QC Duplicate report	٠				
FormNbr: R		FormatType: FEAD	Q	VersionNbr:	: 05	File Name	: h:\Reportdb\ec	File Name: h:\Reportdb\edd\Fead\V\Rad\W06843.Edd, h:\Reportdb\edd\Fead\V\Rad\62283.Ed	43.Edd, h:\Repo	ntdb/edd	NFeadIMR	ad\62283.Ed
Lab Sample Id: Client Id:	M4LQG1ER B2X7Y9	IER		Sdg/Rept Nbr: Matrix: QC Type:	Nbr: W06843 WATER DUP		62283 WATER	Collec Samp Receiv	Collection Date: Sample On Date: Received Date:	08/11/2014	08/11/2014 10:39	36
SAF Nbr Cor S14-008 MW/6	Contract Nbr MW6-SBB-A19981	Test User	Cas	Case Nbr S/	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	p) e	_	FSuffix RTyp AW H
Batch #/ Analyt/ Qc Type CAS# 4227042 Tc-99 DUP 14133-76-7	Result/ Orig Rst 1.12E+04 1.13E+04	Tot/Cnt Unit Uncert 2S pCi/L 6.1E+02 5.7E+01	nt Qu- 2S al 2	u- I MDC 9.67E+00	Tracer Yield) 100.0	Spk Conc/ %Rec	Analy Method TC99_ETVDSK	Aliq Size/ DSK 1.252E-01 L	Date/Time Analyzed 08/27/2014 00:03	RPD/ UCL .6 20.0	RER/ UCL 0.2 3	LCS R LCL/UCL Typ D
Page 37 of 137				·								
TestAmerica Inc rptFeadRadEdd v3.68		U Qual - Ans J Qual - No B Qual- Ans	alyzed 1 U quali ılyte wa	for, but the r ifier has been	esult is less n assigned a he associate	than the Mind the result	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual- Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	fy the nuclide CRDL).			24

					•	T		Donot	42		[ra]	Lab Code: TARL	ARL
Monday, September 15, 2014	+			este	√ meri	ca mc (C Dupine	TestAmerica inc QC Duplicate report	<u>۔</u>				
FormNbr: R	ē.	FormatType:	FEAD	>	VersionNbr:	or: 05	File Name	h:\Reportdb\e	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	343.Edd, h:\Repo	rtdb\edd\	FeadIMRa	Id\62283.Ed
I sh Sample Id:	M4! O.13HR			Š	Sda/Rept Nbr:		W06843 6	62283	Colle	Collection Date:	08/11//	08/11/2014 11:26	26
	B2X811			Ž	Matrix:			WATER	Samt	Sample On Date:			
'Solids%*:	-			ပ္မွ	С Туре:		۵.		Recei	Received Date:	08/11/2014	2014	
SAF Nbr Contract Nbr S14-008 MW6-SBB-A19981	Nbr -A19981	Test User		Case Nb		SAS Nbr	Suffix	Decant	Distilled Volume	File Id	<u>p</u>	LL.	FSuffix RTyp AY H
Analyt CAS# Ipha 2587-4(T Unit Ur pCi/L 7.6 4.9	Tot/Cnt Uncert 2S 7.6E+00 4.9E+00	Qu-	MDC 4.92E+00	Tracer Yield 0 100.0	Spk Conc/ %Rec	Analy Method 9310_ALPHAB	Aliq Size/ PHAB 5.00E-02 L	Date/Time Analyzed 09/06/2014 18:17	RPD/ UCL 7.2 20.0	RER/ UCL 0.3	LCS R LCL/UCL Typ D
Page 38 of 137													
TestAmerica Inc rptFeadRadEdd v3.68		U Qual J Qual B Qual-	U Qual - Analyzed for, b J Qual - No U qualifier l B Qual- Analyte was for	ed for, ualifie	but the r has be ound in	result is les en assigned the associat	s than the Mc and the resul	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual- Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	ify the nuclide (CRDL).			25

Mondan Contombor 15, 2014	014			TastA	merica	Inc Ot	Dunlie	Tost America Inc OC Dunlicate Report	4			Lab Code: TARL	TARL
EormNhr. R		FormatTvr	FormatTvne: FEAD	Vel Vel	VersionNbr:	05	File Name	File Name: h:\Reportdb\edd\Fead\V\Rad\W06843.Edd, h:\Reportdb\edd\Fead\V\Rad\62283.Ed	1∖Fead WRad\W	/06843.Edd, h:\R	teportdb\e	⅓d∖FeadIWF	ad\62283.Ed
					9	1	040	80083	2	Collection Date:	1,80	08/11/2014 11:26	.26
Lab Sample Id:	M4LQK1GK	Ķ.		Say Say	Sag/Kept Nor: Matrix:	br: wood43 WATER		ozzos WATER	5 iš	Sample On Date:			
Moisture/Solids%*:				8	QC Type:	DUP			ž	Received Date:		08/11/2014	
SAF Nbr Contr S14-008 MW6-S	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr	l.	SAS Nbr	Suffix	Decant	Distilled Volume		File Id		FSuffix RTyp AZ H
Batch # / Analytl Qc Type CAS# 4227047 Beta DUP 12587-47-2	Result/ Orig Rst 1.01E+03 1.17E+03	Duit pCi/L	Tot/Cnt Uncert 2S 1.3E+02 1.6E+01	да <u>в</u> 4.	MDC 4.64E+00	Tracer Yield 100.0	Spk Conc/	Analy Method 9310_ALPHAB	Alia Size/ Size/ AB 9.08E-02	Date/Time Analyzed Analyzed 2 08/28/2014 08:15	ne RPD/ 14 14.6 5 20.0	. UCL	LCL/UCL Typ D
TestAmerica Inc rptFeadRadEdd v3.68		UQu JQu BQu	al - Analyz al - No U ç al- Analyt	ced for, k qualifier e was fou	out the res has been and in the	sult is less assigned a	than the Mc ind the resul d laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	can did not id Reporting Lir the MDC.	entify the nuc nit (CRDL).	lide.		26

Monday, September 15, 2014	2014		TestA	merica	Inc Q(Ouplic	TestAmerica Inc QC Duplicate Report	+ -		La	Lab Code: TARL	ARL
FormNbr: R		FormatType: FEAD	Ver	VersionNbr:	05	File Name	: h:\Reportdb\ed	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	843.Edd, h:\Rep	ortdb\edd\	FeadIMR	ad\62283.Ed
Lab Sample Id: Client Id: Moisture/Solids%*:	M4MMT1CR B2X6J3	S S	Sdç Mat	Sdg/Rept Nbr: Matrix: QC Type:	br: W06843 WATER DUP		62283 WATER	Colk Sam Rece	Collection Date: Sample On Date: Received Date:		08/12/2014 10:57 08/12/2014	:57
SAF Nbr Cont	Contract Nbr MW6-SBB-A19981	Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume		File Id	D.	FSuffix RTyp BA H
Batch # / Analyt/ Qc Type CAS# 4227049 -129 DUP 15046-84-1	Result/ Orig Rst 6.86E-01 6.27E-01	Tot/Cnt Unit Uncert 28 pCi/L 3.3E-01 3.3E-01	පු <u>අ</u> දු	3.25E-01	Tracer Yield 93.5	Spk Conc/ %Rec	Method I129LL_SEP_L		Aliq Date/Time Size/ Analyzed 3.8368E+00 09/06/2014 L 11.26	20.0 20.0	NER/ UCL 0.3 3	LCS R LCL/UCL Typ D
TestAmerica Inc rptFeadRadEdd v3.68	-	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual- Analyte was found in the associated laboratory blank above the MDC.	zed for, b qualifier te was for	out the res has been a	rult is less assigned a associate	than the M and the resu d laborator	de or gamma s It is below the y blank above	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	tify the nuclid (CRDL).	ا ن		27

16 J. C. J. J. C. J. J. C. J. J. C. J. J. C. J. J. C. J. J. C. J. J. J. C. J.	7100			V +00 L	o inom	Incode	Dunlice	Tout Amorica Inc OC Dunlicate Renort	<u>+</u>			Lab Code: TARL	ARL
Monday, September 13, 2014	7014			I est	America	a mic CC	Jupne	are trepo	.			[:	1
FormNbr: R		FormatType:	ype: FEAD	>	VersionNbr:	05	File Name	: h:\Reportdb\e	File Name: h:\Reportdb\edd\Fead\V\Rad\W06843.Edd, h:\Reportdb\edd\Fead\V\Rad\6Z283.Ed)6843.Edd, h:\Rep	portdb/edd	\\FeadIV\K	ad/62283.Ed
l ah Sample Id:	M4MMX2FR	뜠		Sc	Sdg/Rept Nbr:	Vbr: W06843		62283	င်	Collection Date:		08/12/2014 10:22	:22
Client Id:	B2X6M3	, ,		Ž	Matrix:	WATER		WATER	Sai	Sample On Date:			
Moisture/Solids%*:				သွ	C Type:	DUP			Rec	Received Date:	08/12/2014		
SAF Nbr Con 114-036 MW6	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume		File Id	_	FSuffix RTyp BB H
Analyt CAS# 1-3 0028-11	Result/ Orig Rst 4.37E+02 3.60E+02	Unit pCi/L	Tot/Cnt Uncert 2S 1.7E+02 1.5E+02	Qu- la	MDC 3.14E+02	Tracer Yield 100.0	Spk Conc/ %Rec	Analy Method 906.0_H3_LSC	Aliq Size/ LSC 5.021E-03	Date/Time Analyzed 3 09/08/2014 19:40	RPD/ UCL 19.2 20.0	RER/ UCL 0.7 3	LCL/UCL Typ
Page													
e 41 of 137	-												
TestAmerica Inc rptFeadRadEdd v3.68		D I D I	ual - Analy ual - No U o ual- Analy	zed for, qualifie	but the re r has been	esult is less t assigned an	than the Mo nd the resul I laboratory	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did no J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	ntify the nuclic it (CRDL).	e.	,	28

Monday, Sentember 15, 2014	014			pet A m	Terica I	nc Oc	Matrix S	TastAmerica Inc Oc Watrix Snike Report	1		Lab	Lab Code: TARL	4RL
Monday, Deprember 19, 2			- -		iciica i	יווג		ndar and					1 COCCO 4
FormNbr: R		FormatT	FormatType: FEAD	Ve	VersionNbr: 05	05	File Name	h:\Reportdb\edd	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	43.Edd, h:\Repo	rtdb\edd\F	ead!V\Ka	d/62283.Ed
Lab Sample Id: Client Id:	M4LQF1EW B2X7Y8	ΜΞ		Sd	Sdg/Rept Nbr: Matrix:		W06843 6 WATER \	62283 WATER	Collec Samp	Collection Date: Sample On Date:	08/11/2	08/11/2014 07:40	40
Moisture/Solids%*:	-	!		ğ	QC Type:	MS			Receiv	Received Date:	08/11/2014		
SAF Nbr Contr S14-008 MW6-S	Contract Nbr MW6-SBB-A19981		Test User	Case Nbr		SAS Nbr	Suffix	Decant	Distilled Volume	File Id	<u> </u>	<u>u.</u>	FSuffix RTyp AV H
Batch # / Analyt/ Qc Type CAS# 4227040 Uranium MS 7440-61-1	Result/ Orig Rst 3.04E+01	Unit ug/L	Tot/Cnt Uncert 2S 3.6E+00 3.6E+00	Qu- al 7	MDC 7.03E-02	Tracer Yield	Spk Conc/ %Rec 3.09E+01 98.4	Analy Method UTOT_KPA	Aliq Size/ 2.98E+01	Date/Time Analyzed 09/09/2014 08:36	RPD/ UCL	RER/ UCL	LCS R LCL/UCL Typ 70 D 130
Poge 42 of 427													
TestAmerica Inc rptFeadRadEdd v3.68	-	D D D D D	ual - Analyz ıal - No U q nal- Analyt	ed for, l ualifier e was fo	but the red has been und in the	sult is less assigned a	than the Mc and the resul	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not J Qual - No U qualifier has been assigned and the result is below the Reporting B Qual - Analyte was found in the associated laboratory blank above the MDC.	U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL). B Qual - Analyte was found in the associated laboratory blank above the MDC.	fy the nuclide CRDL).			29

	,				Copio		. 0, _					
TARL	kad\62283.Ed	:26	FSuffix RTyp AX H	LCS R LCL/UCL Typ 60 D 140						:	30	
Lab Code:	d\Fead\\\F	08/11/2014 11:26 08/11/2014		RER/ UCL								
 	rtdb\edr	08/11	Б	RPD/ UCL					 		 	
	3.Edd, h:\Repo	Collection Date: Sample On Date: Received Date:	File Id	Date/Time Analyzed 08/27/2014 02:08							y the nuclide CRDL).	•
	File Name: h:\Reportdb\edd\FeadIV\Rad\W06843.Edd, h:\Reportdb\edd\FeadIV\Rad\62283.Ed	Collec Samp Receiv	Distilled Volume	Aliq Size/ 1.273E-01 L							U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. I One I on II qualifier has been assigned and the result is below the Reporting Limit (CRDL).	ش ش
ort	edd∖Fea		Ď	VDSK							scan de Repo	e the N
oike Rep	h:\Reportdb\e	62283 WATER	Decant	Analy Method TC99_ETVDSK							c or gamma is below th	blank abov
TestAmerica Inc Qc Matrix Spike Report	File Name:		Suffix	Spk Conc/ %Rec 3.56E+03 92.6							than the Md	B Qual- Analyte was found in the associated laboratory blank above the MDC.
Inc Qc	05	lbr: W06843 WATER MS	SAS Nbr	Tracer Yield 100.0						,	sult is less	e associate
merica]	VersionNbr: 05	Sdg/Rept Nbr: Matrix: QC Type:	;	MDC 9.44E+00							; but the re	found in th
estA		0 2 0	Case Nbr	Qu- al							zed for	le was
	rpe: FEAD		Test User	Tot/Cnt Uncert 2S 4.5E+02 4.5E+01							U Qual - Analyzed for, but I Onel - No II qualifier ha	nal- Analyi
	FormatType:	_	<u> </u>	Unit pCi/L							Į Ž	ў <u>О́</u>
014	ъ.	M4LQJ1GW B2X811	Contract Nbr MW6-SBB-A19981					<u>-</u>	 		 	
Monday, September 15, 2014	FormNbr: R	Lab Sample Id: Client Id:	5	Analytı CAS# c-99 4133-7(a Inc	rptFeadRadEdd v3.68
Monday, S.	Ĭ.	Lab Samı Client Id:	SAF Nbr S14-008	Batch # / Qc Type 4227042 T							TestAmerica Inc	rptFeadRa

:hromium
C
Hexavalent (

Analyst:	l. Salifu	il.				Calibration Ct	Calibration Curve Information				BATCH#	4225075
Start Date:	8/13/2014	014		Amount (mL)	Conc.(mg/L)	ABS.	,		R Squared	0.9999	SDG#	W06843
Start Time:	16:20	0,	Blank	0.000	0.000	0.000	$ y = 0.0157x^2 + 0.5029x + 0.0015$	029x + 0.0015	2nd°Coeff (a)	0.0157	Matrix	Water
End Date:	8/13/2014	014	Std. 1	0.100	0.050	0.097	<u> </u>		1st°Coeff (b)	0.5029	SOP Information	rmation
End Time	17:18	8	Std. 2	0.500	0.250	0.482		•	Constant (c)	0.0015	RL-WC-003	C003
			Std. 3	0.750	0.375	0.722	<u> </u>	\	Intercept	-0.0030	Revision 6	on 6
Analyst Signatures,	- 1		Std. 4	1.500	0.750	1.435	\ <u></u>				_	
	A		Std 5	2.000	1.000	1.871	\ <u>\</u>				Instrument Information	nformation
)		Standard Volume (mL):	me (mL):		100.000	\		MDL (mg/L)	0.008	Instrument:	Hach DR2010
Date:	08/13/14	/14	Date of Curve:			8/13/2014	8				Wavelength:	540
			Calibration	Calibration Information:	ICV/CCV In	ICV/CCV Information:	LCS Information:	rmation:	Matrix Spike	Matrix Spike Information:		
Dilution ID #			Cr-14	Cr-14-00313	Cr-14	Cr-14-00314	Cr-14-	Cr-14-00313	Cr-14	Cr-14-00313		•
Prep Date:			./80	08/13/14	1/80	08/13/14	08/13/14	3/14	./80	08/13/14		
Concentration (mg/L)	(1		3	50	9	50	50	0		50		
Expiration Date:		_	1/80	08/14/14	1/80	08/14/14	08/14/14	4/14	/80	08/14/14		
Pipettor(s)			201,2	201,282,286	32	286	286	98	2	282		
Volume Used (mL)		-			J.1	1.000	1.00	00	7	1.50		
Final Volume (mL)					100	100.000	100.00	.00	10,	100.00		
Expected Value (mg/L	1/L)				9.0	0.500	0.500	00	0.	0.750		
Sample ID C	Client ID	Type	Final Volume (mL)	Sample ABS.	Color Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Expected (mg/L)	% Rec. / RPD	Final Reported Conc. (mg/L)	Qualifier
n/a	n/a	ICA	100.000	0.955		0.955	1	0.4961	0.5000	99.22%	0.496	
n/a	n/a	ICB	100.000	0.001		0.001	Ψ.	0.0020			<mdl< td=""><td>Ω</td></mdl<>	Ω
n/a	n/a	۸۵۵	100.000	0.928		0.928	1	0.4817	0.5000	96.34%	0.482	
n/a	n/a	CCB	100.000	0.001		0.001	1	0.0020			<mdl< td=""><td>n</td></mdl<>	n
M4L9J1AA	n/a	BLK	100.000	0.001		0.001	1	0.0020			<wdl< td=""><td>ם</td></wdl<>	ם
M4L9J1AC	n/a	SOT	100.000	0.948		0.948	-	0.4924	0.5000	98.47%	0.492	
M4L791AA B2X5X6	.9X9	Sample	100.000	0.007		0.007	1	0.0050			-MDI	⊃
M4L791AC B2X5X6	,2X6	MS*	100.000	1.510		1.510	-	0.7967	0.7500	106.22%	0.797	-
M4L791AD B2X5X6	.9XG	MSD*	100.000	1.491		1.491	1	0.7862	0.7500	104.83%	0.786	
M4L791AE B2X	5X6 DUP'	Duplicate	100.000	0.007		0.007	1	0.0050			<mdi_< td=""><td>ם</td></mdi_<>	ם
١	B2X634'	Sample	100.000	0.027		0.027	1	0.0151			0.015	
M4L8E1AA B2X641	641'	Sample	100.000	0.012		0.012	_	0.0075			≺MDL	⊃
	.828	Sample	100.000	0.046	·	0.046	_	0.0247			0.025	
M4L8L1AA B2X665	.299	Sample	100.000	0.021		0.021	-	0.0121			0.012	
n/a	n/a	CCV	100.000	0.927		0.927	τ-	0.4812	0.5000	96.24%	0.481	
n/a	n/a	CCB	100.000	0.001		0.001	-	0.0020			≺MDL	Π

*If the parent sample is above the MDL, the Final Reported Conc. (mg/L) for the MS and MSD is corrected for the parent sample. CG-223 Rev. 7 12/2013

Page 44 of 137

-	7	ana tapo
ø	(1
		1

Hexavalent Chromium - Water

Analyst.	Salifu				Calibration Cur	Calibration Curve Information		A STATE OF THE STA	BATCH#	4225075
Start Date:	8/13/2014		Amount (mL)	Conc.(mg/L)	ABS.	c	R Squared	6666.0	# 9ds	W06843
Start Time:	16:20	Blank		0.000	0.000	$y = 0.0157x^2 + 0.5029x + 0.0015$ $p^2 = 0.0000$	2nd°Coeff (a)	0.0157	Matrix	Water
End Date:	8/13/2014	Std. 1	0.100	0.050	0.097	20000	1st°Coeff (b)	0.5029	SOP Information	rmation
End Time	17:18	Std. 2	0.500	0.250	0.482	•	Constant (c)	0.0015	- RI-W	, 003
	(Std. 3	0.750	0.375	0.722	\	Intercept	-0.0030	Revision 6	on 6
Analyst Signature:		Std. 4	1.500	0.750	1.435	\				
THE PERSON NAMED IN COLUMN TO SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN TO SE		Std 5	2.000	1.000	1.871	\			Instrument Information	nformation
		Standard Volume (mL):	me (mL):		100.000		MDL (mg/L)	0.008	Instrument:	Hach DR2010
Date:) 08/13/14	Date of Curve:			8/13/2014				Wavelength:	540
		Calibration	Calibration Information:	ICV/CCV Information:	ormation:	LCS Information:	Matrix Spike Information:	Information:		
Dilution ID #		Cr-14	Cr-14-00313	Cr-14-00314	0314	Cr-14-00313	Cr-14-00313	00313		
Prep Date:	-	/80	08/13/14	08/13/14	3/14	08/13/14	08/13/14	3/14		
Concentration (mg/L)	-		50	20		20	50	0		
Expiration Date:		./80	08/14/14	08/14/14	1/14	08/14/14	08/14/14	4/14		
Pipettor(s)		201,2	201,282,286	286	9	286	28	22		
Volume Used (mL)				1.000	00	1.00	1.50	20	·	
Final Volume (mL)	-			100.000	000	100.00	100	.00		
Expected Value (mg/L)				0.500	00	0.500	0.750	50		
M4L8P1AA B2X670	0, Sample	100.000	0.025		0.025	1 0.0141			0.014	
M4L8V1AA B2X682	2' Sample	100.000	0.015		0.015	1 0.0090			0.009	
		100.000				-			-	
	-	100.000				1				
	-	100.000				<u></u>				
		100.000				-				
	- =	100.000				-				
		100.000				-				
		100.000				1			_	
		100.000								
n/a	n/a CCV	100.000	0.929		0.929	1 0.4822	0.5000	96.45%	0.482	
n/a	n/a CCB	100.000	0.002		0.002	1 0.0025			<mdl< td=""><td>D.</td></mdl<>	D.
		100.000				_				
		100.000				1				
	-	100.000				-				
		100.000				1				
		100.000				T-				
n/a	CCV	100.000								
n/a	CCB	100.000								

*If the parent sample is above the MDL, the Final Reported Conc. (mg/L) for the MS and MSD is corrected for the parent sample. CG-223 Rev. 7 12/2013

TestAmerica

Hexavalent Chromium - Water

Analyst:	l.Salifu				Calibration Cu	Calibration Curve Information				BATCH#	4224083
Start Date:	8/12/2014		Amount (mL)	Conc.(mg/L)	ABS	0.000.3 . 0.0002. 0.0000	90000	R Squared	6666-0	SDG#	W06843
Start Time:	15:20	Blank	0.000	0.000	000.0	y = 0.019(x + 0.5027x)	0000 ± X/70	2nd°Coeff (a)	0.0191	Matrix	Water
End Date:	8/12/2014	Std. 1	0.100	0.050	960.0		\	1st°Coeff (b)	0.5027	SOP Information	mation
End Time	16:30	Std. 2	0.500	0.250	0.481		•	Constant (c)	0.0016	RL-WC-003	-003
		Std. 3	0.750	0.375	0.719	_	\	Intercept	-0.0032	Revision 6	on 6
Analyst Signature: "		Std. 4	1.500	0.750	1.422	\					
	7	Std 5	2.000	1,000	1.851	\				Instrument Information	nformation
中		Standard Volume (mL):	ne (mL):		100.000	\		MDL (mg/L)	0.008	Instrument:	Hach DR2010
Date:	08/12/14	Date of Curve:			8/12/2014	•				Wavelength:	540
)		Calibration	Calibration Information:	ICV/CCV Information:	formation:	LCS Information:	mation:	Matrix Spike	Matrix Spike Information:		
Difution ID #		Cr-14	Cr-14-00311	Cr-14-	Cr-14-00312	Cr-14-00311	0311	Cr-14	Cr-14-00311		
Prep Date:		1/80	08/12/14	08/12/14	2/14	08/12/14	2/14	1/80	08/12/14		
Concentration (mg/L)			50	Đ.	50	20	(3	50		
Expiration Date:		/80	08/13/14	08/13/14	3/14	08/13/14	3/14	08/1	08/13/14		
Pipettor(s)	_	201,2	201,282,286	28	286	286	9	2	282		
Volume Used (mL)	_			1.0	1.000	1.00	0(1.	1.50		
Final Volume (mL)				100.	100.000	100.00	00	100	100.00		
Expected Value (mg/L)				0.5	0.500	0.500	00	0.7	0.750		
Sample ID Clier	Client ID Type	Final Volume (mL)	Sample ABS.	Color Blank ABS.	Corrected ABS.	Dilution Factor	Curve Conc. (mg/L)	Expected (mg/L)	% Rec. / RPD	Final Reported Conc. (mg/L)	Qualifier
/u l/a n/a	n/a ICV	100.000	0.949		0.949	-	0.4959	0.5000	99.17%	0.496	
		100.000	0.001		0.001	1	0.0021			≺MDF	Ω
n/a n/	n/a ccv	100.000	0.887		0.887	1	0.4625	0.5000	92.50%	0.463	
		100.000	0.001		0.001	1	0.0021			NDL <	D
M4LXD1AA n/	n/a BLK	100.000	0.002		0.002	_	0.0026			<mdl< td=""><td>n</td></mdl<>	n
	.00	100.000	0.945		0.945	~	0.4937	0.5000	98.74%	0.494	
M4LW71AA B2X605	: Sample	100.000	0.004		0.004	1	0.0036			-MDI_	ם
1		100.000	1.506		1.506	+	0.8020	0.7500	106.93%	0.802	
M4LW71AD B2X605'	* MSD*	100.000	1.502		1.502	1	0.7997	0.7500	106.63%	0.800	
ŀ	Duplicate	e 100.000	0.005		0.005	1	0.0041			<mdl< td=""><td>D</td></mdl<>	D
		100.000				1		-			
		100.000				+				-	
	-	100.000				_					
	-	100.000				-					
n/a n/	n/a ccv	100.000	0.884		0.884	_	0.4609	0.5000	92.18%	0.461	
n/a n/	n/a CCB	100.000	0.002		0.002	_	0.0026			- MDL	5

*If the parent sample is above the MDL, the Final Reported Conc. (mg/L) for the MS and MSD is corrected for the parent sample. CG-223 Rev. 7 12/2013

Page 46 of 137



Data Deptiem verification Checklist RADIOCHEMISTRY, First Level Review

9/8/2014 11:14:16 AM

Lot No., Due Date:

J4H120409: 09/12/2014

Client, Site:

384868; A210440HANFORD HANFORD QC Batch No., Method Test: 4245067; RALPHA-A Alpha by GPC-Am

SDG, Matrix:

W06843; WATER

Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes No N/A
QC Batch	
Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sho	eet? Yes No N/A
Are the QC appropriate for the analysis included in the batch?	Yes No N/A
Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yea No N/A
Does the Worksheets include a Tracer Vial label for each sample?	Yes No N/A
QC & Samples	
Is the blank results, yield, and MDA within contract limits?	Yes No N/A
Is the LCS result, yield, and MDA within contract limits?	Yes No N/A
Are the MS/MSD results, yields, and MDA within contract limits?	Yes No N/A
Are the duplicate result, yields, and MDAs within contract limits?	Yes No N/A
Are the sample yields and MDAs within contract limits?	Yes No N/A
) Raw Data	Va Parir
Were results calculated in the correct units?	Yes No N/A
Were analysis volumes entered correctly?	Yes No N/A
Were Yields entered correctly?	Yes No N/A
Were spectra reviewed/meet contractual requirements?	Yes No N/A
Were raw counts reviewed for anomalies?	Yes No N/A
Other Are all nonconformances included and noted?	Yeş No N/A
2 Are all required forms filled out?	Yeş No N/A
3 Was the correct methodology used?	Yes No N/A
4 Was transcription checked?	
	Yes No N/A
5 Were all calculations checked at a minimum frequency?	Yes No N/A
Are worksheet entries complete and correct?	Yes No N/A
Comments on any No response: NCM 10-28558	3

Date



Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			· · ·
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?		3	
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?	1,		
3. Is the blank result < the Contract Detection Limit?			
5. Is the stank result with Confident Detection Limit:			
4. Is the blank result > the Contract Detection Limit but the			
sample result < the Contract Detection Limit?			
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract			
Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?	-		
0.75 (1.1.1)			L
8. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			1
1. Are all Nonconformances (NCM) included and noted?			
2. Was the correct methodology used?	,		
3. Were units checked?			
ents on any "No" response:			
V<<	,	~ 1.	. 1.
۸۵۵۱	ε.	- $ -$	41
Nt, really ze		,	

Clouseau **Nonconformance Memo**



NCM #: 10-28558

NCM Initiated By: Tom Mcginnis

Date Opened: 09/08/2014

Date Closed:

Classification: Deficiency

Status: PMREVIEW

Production Area: Environmental - Sep

Tests: Alpha by GPC-Am

Lot #'s (Sample #'s): J4H120409 (4,5), J4I020000

(67).

QC Batches: 4245067,

Nonconformance: Batch Result Out of Limits

Subcategory: MDA exceeds RDL

W00843

Problem Description / Root Cause

Name Tom Mcginnis

Date 09/08/2014 Description

The duplicate agreement for the initial analysis batch 4227046 exceeded acceptance criteria. Reanalysis batch 4245067 was performed. The MDA for the samples and associated QC in batch 4245067 exceeds the CRDL due to aliquot reduction based

on weight screening results. The sample results are greater than the MDA.

Corrective Action

Name

Date

Corrective Action

Tom Mcginnis

09/08/2014

The PM was notified of the batch deficiencies.

Client Notification Summary

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

Quality Assurance Verification

Verified By

Due Date

Status

This section not yet completed by QA.

Notes

Approval History

Date Approved

Approved By

Position

Date Printed: 9/8/2014

Page 1 of 1



Data Deptiem/berifloatian Checklist RADIOCHEMISTRY, First Level Review

9/3/2014 5:32:50 PM

Page 1

Lot No., Due Date:

J4H120409; 09/12/2014

Date

Client, Site:

384868; A210440HANFORD HANFORD QC Batch No., Method Test: 4227047; RBETA-SR Beta by GPC-Sr/Y

SDG, Matrix:

First Level

TestAmerica Richland

QAS_RADCALCv4.8.68.1

W06843; WATER

OD.	5, Matrix. VVU0043; VVATER			
	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0 2.1	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yeş	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	19/		N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
	QC & Samples Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
	Raw Data Were results calculated in the correct units?			N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
	Other Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5,6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response: NCM 10-28512		eproporale de la	
Kanada	Thing SM SA			

Page 50 of 137



Data Review Checklist RADIOCHEMISTRY Second Level Review

Review Item	Yes ($$)	No (√)	NA Cab
. Sample Analysis		110 (4)	NA (√)
Are the sample yields within acceptance criteria?			
Is the sample Minimum Detectable Activity < the Contract			1
etection Limit?	-	سسد ا	ļ
. Are the correct isotopes reported?			
. QC Samples			
. Is the Minimum Detectable Activity for the blank result ≤ the			
ouract Defection Timits			
. Does the blank result meet the Contract criteria?			<u> </u>
. Is the blank result < the Contract Detection Limit?			
. Is the blank result > the Contract Detection Limit but the			ļ
ample result < the Contract Detection Limit?			
. Is the LCS recovery within contract acceptance criteria?			1
. Is the LCS Minimum Detectable Activity < the Contract			-
Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?	<u> </u>		
3. Do the duplicate sample results and yields meet acceptance criteria?	2		
C. Other	+		
l. Are all Nonconformances (NCM) included and noted?	B		
2. Was the correct methodology used?	2		-
3. Were units checked?			

Clouseau Nonconformance Memo



NCM #: 10-28512

NCM Initiated By: Tom Mcginnis

Date Opened: 09/03/2014

Date Closed:

Classification: Deficiency

Status: PMREVIEW

Production Area: Environmental - Sep

Tests: Beta by GPC-Sr/Y

Lot #'s (Sample #'s): J4H120409 (4,5), J4H150000

(47),

QC Batches: 4227047.

Nonconformance: Batch Result Out of Limits

Subcategory: MDA exceeds RDL

Problem Description / Root Cause

Name Tom Mcginnis <u>Date</u>

Description

09/03/2014 The MDA for the samples and associated QC in batch 4227047 exceeds the CRDL

due to aliquot reduction based on weight screening results. The sample results are

greater than the MDA. All other batch results meet acceptance criteria.

Corrective Action

<u>Name</u>

<u>Date</u>

Corrective Action

Tom Mcginnis

09/03/2014

The PM was notified of the batch deficiencies.

Client Notification Summary

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

Quality Assurance Verification

Verified By

Due Date

Status

Notes

This section not yet completed by QA.

Approval History

Date Approved

Approved By

Position

Date Printed: 9/3/2014

Page 1 of 1



Data Reptiew/Verificațian Checklist RADIOCHEMISTRY, First Level Review

9/9/2014 2:15:34 PM

Lot No., Due Date:

J4H130433; 09/12/2014

Client, Site: 384868; A210440HANFORD HANFORD

QC Batch No., Method Test: 4227048; RSRTOT SrTot by GPC

SDG, Matrix:

W06843; WATER

DG, Matrix.	WU0843; WATER	
.0 COC .1 Is the ICOC page	complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes No N/A
0 QC Batch		
1 Do the Summary/l	Detailed Reports include a calculated result for each sample listed on the QC Batch Sh	neet? Yes No N/A
2 Are the QC appro	priate for the analysis included in the batch?	Yes No N/A
3 Is the Analytical B	Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes No N/A
4 Does the Worksho	eets include a Tracer Vial label for each sample?	Yes No N/A
0 QC & Samples	ts, yield, and MDA within contract limits?	Vog No N/A
1 15 the blank result	.s, yield, and with contract infilts:	Yes No N/A
2 Is the LCS result,	yield, and MDA within contract limits?	Yes No N/A
3 Are the MS/MSD	results, yields, and MDA within contract limits?	Yes No N/A
4 Are the duplicate	result, yields, and MDAs within contract limits?	Yes No N/A
	elds and MDAs within contract limits?	Yes No N/A
0 Raw Data	culated in the correct units?	
i vvere results calc	ulated in the correct units?	Yes No N/A
2 Were analysis vol	lumes entered correctly?	Yes No N/A
.3 Were Yields ente	red correctly?	Yes No N/A
.4 Were spectra rev	riewed/meet contractual requirements?	Yes No N/A
.5 Were raw counts	reviewed for anomalies?	Yes No N/A
.0 Other		
T Are all noncontor	mances included and noted?	Yes No N/A
2 Are all required fo		Yes No N/A
.3 Was the correct r	nethodology used?	Yes No N/A
.4 Was transcription	ı checked?	Yes No N/A
.5 Were all calculati	ions checked at a minimum frequency?	Yes No N/A
	ntries complete and correct?	Yes No N/A
6.0 Comments on an	ıy No response:	

First Level_

MEST

Date 9/9/14



Second Level Review

Batch Number:	4	1227048

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	4		
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?	1		
4. Is the blank result > the Contract Detection Limit but the			
sample result < the Contract Detection Limit?			
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract			
Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance			
criteria?	<u> </u>		
C. Other			
1. Are all Nonconformances (NCM) included and noted?			-
2. Was the correct methodology used?			
3. Were units checked?			

Comments on any "No" response:	
	SR 2pcil
	_
Q	
Second Level Review:	Date: 9/10/14



Data Review Yerification Checklist RADIOCHEMISTRY, First Level Review

9/11/2014 3:59:54 PM

Lot No., Due Date:

J4H130433; 09/12/2014

Client, Site:

384868; A210440HANFORD HANFORD QC Batch No., Method Test: 4227045; RGAMMA Gamma by GER

SDG, Matrix:

W06843; WATER

		78795AMEZIN	gggragang p	ESTERNIC CHEST OF
1.1	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yeş	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
34	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
	QC & Samples Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
4.0 4.1	Raw Data Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4 4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
1.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
6.0 5.1	Other Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response:		—	
MA		i sin matrian	autu 201 - 4.0	aataa ee wee oo oo gaaa

TestAmerica Richland QAS_RADCALCv4.8.68.1

Page 1



Second Level Review

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result \leq the			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the			
sample result < the Contract Detection Limit?			
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract			
Detection Limit?]
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
1. Are all Nonconformances (NCM) included and noted?			
2. Was the correct methodology used?			
3. Were units checked?			

Comments on any "No" response:	
	X EU 50 pail
	Cs 15
	Sb 50
<i>A</i>	Co 25
Second Level Review:	Date: 9/12/14



Data Review Verification Checklist RADIOCHEMISTRY, First Level Review

9/11/2014 3:43:25 PM

Lot No., Due Date:

J4H140432; 09/12/2014

Client, Site:

384868; A210440HANFORD HANFORD QC Batch No., Method Test: 4227049; RGAMLEPS Gamma by LEPS

SDG, Matrix:

W06843; WATER

1.0	COC	Programme or Substitution (Section 1997)	
1.1	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes No	N/A
1.0	OC Batch Do the Summan / October Benediction and substantian the CO Batch Objects		
4-1.	Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes No	N/A
.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes No	N/A
	QC & Samples	Military Section of the section of t	
1,1	Is the blank results, yield, and MDA within contract limits?	Yes No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes No	N/A
.5	Are the sample yields and MDAs within contract limits?	Yes No	N/A
	Raw Data		100
.1	Were results calculated in the correct units?	Yes No	N/A
.2	Were analysis volumes entered correctly?	Yes No	N/A
.3	Were Yields entered correctly?	Yes No	N/A
.4	Were spectra reviewed/meet contractual requirements?	Yes No	N/A
1.5	Were raw counts reviewed for anomalies?	Yes No	N/A
5.0	Other	ariana Ariana	
.1	Are all nonconformances included and noted?	Yes No	N/A
5.2	Are all required forms filled out?	Yes No	N/A
5.3	Was the correct methodology used?	Yes No	N/A
1.4	Was transcription checked?	Yes No	N/A
1.5	Were all calculations checked at a minimum frequency?	Yes No	N/A
1.6	Are worksheet entries complete and correct?	Yes No	N/A
ĝ.0	Comments on any No response:		-
,	CONTROL CONTRO	PARTY STATE AND AND AND ADDRESS OF THE	

First Level

TestAmerica Richland QAS_RADCALCv4.8.68.1

Page 1



Second Level Review

Batch Number: 4227049	Batch Number:	4227049
-----------------------	---------------	---------

Review Item	Yes (\(\sqrt{)}\)	No (√)	NA (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?	V		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?			:
2. Does the blank result meet the Contract criteria?	1		
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the			
sample result < the Contract Detection Limit?			
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	V		
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance criteria?	4		
C. Other	<u> </u>		
1. Are all Nonconformances (NCM) included and noted?			1
2. Was the correct methodology used?			
3. Were units checked?			

Comments on any "No" response:		
	87-129 . Spcil	=
		_
0.		_
Second Level Review: Let Et Ways	Date: 9/12/4	-
1	, '	



Data Review Verification Checklist RADIOCHEMISTRY, First Level Review

9/12/2014 8:30:34 AM

Lot No., Due Date:

J4H130433; 09/12/2014

Client, Site:

384868; A210440HANFORD HANFORD

QC Batch No., Method Test: 4227041; RC14 C-14 by LSC

SDG, Matrix:

W06843; WATER

7.2 (sp. 442).		Production	- 100 HO (3-17	
	GOC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
20	QC Bafch		Aleksile Salasile	
	Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
3.0	QC & Samples			
3.1	Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
4.0 4.1	Raw Data Were results calculated in the correct units?	Yeş	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
4.3	Were Yields entered correctly?	Yes	No	N/A
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
1.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
5.0	Other		ruez-se Moltvid	34 34 1816
5.1	Are all nonconformances included and noted?	Yes	No	N/A
5.2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
6.0	Comments on any No response:			
lia.			nement a se	
P. Carrie				

TestAmerica Richland
QAS_RADCALCv4.8.68.1

First Level

Page 1



Second Level Review

	Yes (√)	No (√)	NA (
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?			
3. Are the correct isotopes reported?			
 B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit? 	e		
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			<u></u>
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?	?		1
8. Do the duplicate sample results and yields meet acceptance criteria?			
C. Other 1. Are all Nonconformances (NCM) included and noted?			V
2. Was the correct methodology used?	-		
3. Were units checked?			



Data Review/Yerificetion Glaecklist RADIOCHEMISTRY, First Level Review

9/3/2014 4:35:26 PM

Lot No., Due Date:

J4H130433,J4H120409,J4H140432; 09/12/2014

Client, Site:

384868; A210440HANFORD HANFORD

QC Batch No., Method Test: 4227042; RTC99 Tc-99 by LSC

SDG, Matrix:

W06843; WATER

		og sensyarsonannas	araparen era
1.1	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes No	N/A
	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yeş No	NI/A
		V	IN/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes No	N/A
4	Does the Worksheets include a Tracer Vial label for each sample?	Yes No	N/A
	QC & Samples		
1.1	Is the blank results, yield, and MDA within contract limits?	Yes No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes No	N/A
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes No	N/A
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes No	N/A
	Raw Data Were results calculated in the correct units?	Yeş No	NI/A
T. I.	vvoic results ediculated in the correct units:	V NO	IN/A
1.2	Were analysis volumes entered correctly?	Yes No	N/A
.3 .3	Were Yields entered correctly?	Yes No	N/A
4	Were spectra reviewed/meet contractual requirements?	Yes No	N/A
,5	Were raw counts reviewed for anomalies?	Yes No	N/A
	Other Are all nonconformances included and noted?	Yes No	N/A
5.2	Are all required forms filled out?	Yeş No	N/A
5.3	Was the correct methodology used?	Yeş No	N/A
5.4	Was transcription checked?	Yeş No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes No	N/A
5.6	Are worksheet entries complete and correct?	Yeş No	N/A
s do lat		V.	
ą.U	Comments on any No-response:		
d d		. 16. PARENT BELEVE OLIVE	National above the action

Page 1



Second Level Review:

Data Review ChecklistRADIOCHEMISTRY

Second Level Review

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract	1.		
Detection Limit?	6		
3. Are the correct isotopes reported?	_		
D 000			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the			
Contract Detection Limit?	~		
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?	- Auto-		-
3. Is the brank result \ the Contract Detection Limit?	<u> </u>		
4. Is the blank result > the Contract Detection Limit but the			
sample result < the Contract Detection Limit?			دسس
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract			
Detection Limit?			
		· · · · · · · · · · · · · · · · · · ·	
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
Are all Nonconformances (NCM) included and noted?			
2. Was the correct methodology used?			- i
2. Was the correct methodology used:			
3. Were units checked?			
	-		.] .

DR-001, Rev. 01, 10/30/2013

Date: 94



Data **Sepiew/Werification/Clapcklist**RADIOCHEMISTRY, First Level Review

9/9/2014 11:53:44 AM

Lot No., Due Date:

J4H140432; 09/12/2014

Client, Site:

384868; A210440HANFORD HANFORD

QC Batch No., Method Test: 4248049; RTRITIUM H-3 by LSC

SDG, Matrix:

W06843; WATER

24 - X-10		91527 TW	NEW YORK	0. 17744.150	(- 1 of)
1.0 1.1 	ls the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A	
2.0 2.1	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A	
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A	
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A	
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A	
	QC & Samples Is the blank results, yield, and MDA within contract limits?	Yeş	No	N/A	617. 87.2
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A	
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A	
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A	
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A	
	Raw Data Were results calculated in the correct units?	Yes	No	N/A	
4.2	Were analysis volumes entered correctly?	Yes	No	N/A	
4.3	Were Yields entered correctly?	Yes	No	N/A	
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A	-6
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A	
	Other Are all nonconformances included and noted?	Yes	No	N/A	1479 178)
5.2	Are all required forms filled out?	Yes	No	N/A	
5.3	Was the correct methodology used?	Yes	No	N/A	
5.4	Was transcription checked?	Yes	No	N/A	
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A	-1 1 1-0
5.6	Are worksheet entries complete and correct?	Yes	No	N/A	
6.0	Comments on any No response: NCM 10-28585		-		

First Level

TestAmerica Richland QAS_RADCALCv4.8.68.1

Page 63 of 137

Page 1



Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?			
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance criteria?	1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1
C. Other1. Are all Nonconformances (NCM) included and noted?			
2. Was the correct methodology used?			
3. Were units checked?			
ents on any "No" response:			
28585		H3 40	Opci/L
			. , , , , , , , , , , , , , , , , , , ,

Clouseau Nonconformance Memo



NCM #: 10-28585

NCM Initiated By: Sarah Nagel

Date Opened: 09/09/2014

Date Closed: 09/09/2014

Classification: Anomaly

Status: CLOSED

Production Area: Counting

Tests: H-3 by LSC

Lot #'s (Sample #'s): J4H120409 (2,3,4,5),

J4H130433 (11,2,3,6), J4H140432 (4), J4H150000

(44),

QC Batches: 4227044, 4248049,

Nonconformance: QC data exceeded criteria

Subcategory: Duplicate precision out of control

Problem Description / Root Cause

Name Sarah Nagel <u>Date</u> 09/09/2014

Description

In batch 4227044 the duplicate agreement was outside acceptance criteria. The

sample and duplicate were recounted in batch 4248049 with the duplicate agrrement

meeting acceptance criteria.

In batch 4227044 there were spurious counts (12.05, 7.95, 7.25, 8.6) on the method blank possibly due to electrostatic discharge. The count was removed and the data recalculated however the MDA was above CRDL. The blank was recounted in batch

4248049 with acceptable results.

Corrective Action

Name

Date

Corrective Action

Sarah Nagel

09/09/2014

The samples were recounted.

Client Notification Summary

Client

Project Manager

Notified

Response How Notified

Note

Response

Response Note

Quality Assurance Verification

Verified By

Due Date

<u>Status</u>

Notes

This section not yet completed by QA.

Approval History

Date Approved

Approved By

Position

Date Printed: 9/9/2014



Data **Septem/Verification/Odlatecklist** RADIOCHEMISTRY, First Level Review

9/9/2014 11:49:00 AM

Lot No., Due Date:

J4H130433,J4H120409,J4H140432; 09/12/2014

Client, Site:

384868; A210440HANFORD HANFORD

QC Batch No., Method Test: 4227044; RTRITIUM H-3 by LSC

SDG, Matrix:

W06843; WATER

James		************	12111111111111111111111111111111111111	·····	
	COC Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A	
		V			
	QC Batch			hey :	
2.1	Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A	
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A	
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A	
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A	a
3.0	QC & Samples			a dignostrului. Marka kara	M.
	Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A	
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A	
3.3	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A	, .,
3.4	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A	
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A	
4.0	Raw Data	Jak			
	Were results calculated in the correct units?	V	No		
4.2	Were analysis volumes entered correctly?	Yes	No	N/A	
4.3	Were Yields entered correctly?	Yes	No	N/A	
4.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A	
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A	
5.0	Other				
İ	Are all nonconformances included and noted?	Yes	No	N/A	
5.2	Are all required forms filled out?	Yes	No	N/A	
5.3	Was the correct methodology used?	Yes	No	N/A	
5.4	Was transcription checked?	Yes	No	N/A	
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A	
5.6	Are worksheet entries complete and correct?	Yes	No	N/A	
6.0	Comments on any No response: NCM 10-28585				

First Level_

2

Date 9/09/2010



Second Level Review

Batch Number:	422704	14

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?		<u></u>	
2. Does the blank result meet the Contract criteria?	-		
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the			
sample result < the Contract Detection Limit?			-
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract			
Detection Limit?	<u> </u>		
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance criteria?			
C. Other			
1. Are all Nonconformances (NCM) included and noted?			
2. Was the correct methodology used?			
3. Were units checked?			

Comments on any "No" response:	
Comments on any "No" response: 0-28585	H3 400
dips, blank exacut	
Second Level Review:	Date: 9914



Data Reyjew/Yerification/Checklist RADIOCHEMISTRY, First Level Review

9/11/2014 4:19:03 PM

Lot No., Due Date:

J4H120409,J4H140432; 09/12/2014

Client, Site:

384868; A210440HANFORD HANFORD

QC Batch No., Method Test: 4227040; RUNAT UNat by KPA

SDG, Matrix:

W06843; WATER

10	COC			
1.1	Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	Yes	No	N/A
2.0 2.1	QC Batch Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	Yes	No	N/A
2.2	Are the QC appropriate for the analysis included in the batch?	Yes	No	N/A
2.3	Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	Yes	No	N/A
2.4	Does the Worksheets include a Tracer Vial label for each sample?	Yes	No	N/A
	QC & Samples Is the blank results, yield, and MDA within contract limits?	Yes	No	N/A
3.2	Is the LCS result, yield, and MDA within contract limits?	Yes	No	N/A
3.3 3.1	Are the MS/MSD results, yields, and MDA within contract limits?	Yes	No	N/A
3.4 ;	Are the duplicate result, yields, and MDAs within contract limits?	Yes	No	N/A
3.5	Are the sample yields and MDAs within contract limits?	Yes	No	N/A
↓.0 1.1	Raw Data Were results calculated in the correct units?	Yes	No	N/A
4.2	Were analysis volumes entered correctly?	Yes	No	N/A
1.3	Were Yields entered correctly?	Yes	No	N/A
1.4	Were spectra reviewed/meet contractual requirements?	Yes	No	N/A
4.5	Were raw counts reviewed for anomalies?	Yes	No	N/A
5.0 5.1,	Other Are all nonconformances included and noted?	Yes	No	N/A
5/2	Are all required forms filled out?	Yes	No	N/A
5.3	Was the correct methodology used?	Yes	No	N/A
5.4	Was transcription checked?	Yes	No	N/A
5.5	Were all calculations checked at a minimum frequency?	Yes	No	N/A
5.6	Are worksheet entries complete and correct?	Yes	No	N/A
ഒറ	Comments on any No response:			

EstAmerica Richland
SAS_RADCALCv4.8.68.1

Page 1



Second Level Review

Batch Number: _	4227040	
-		

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract			
Detection Limit?			
3. Are the correct isotopes reported?			
B. QC Samples			
 Is the Minimum Detectable Activity for the blank result ≤ the 			
Contract Detection Limit?			
2. Does the blank result meet the Contract criteria?			
3. Is the blank result < the Contract Detection Limit?			
4. Is the blank result > the Contract Detection Limit but the			
sample result < the Contract Detection Limit?			
5. Is the LCS recovery within contract acceptance criteria?			
6. Is the LCS Minimum Detectable Activity ≤ the Contract			
Detection Limit?	-		
7. Do the MS/MSD results and yields meet acceptance criteria?			
8. Do the duplicate sample results and yields meet acceptance			
criteria?			
C. Other			
1. Are all Nonconformances (NCM) included and noted?			
2. Was the correct methodology used?			
3. Were units checked?			

Comments on any "No" response:	
·	wat .144 ugl
Second Level Review:	Date: 91214
igwedge	1 1



September 15002014 Data Review Check List **Hexavalent Chromium**

Batch Number(s): 4225075	Lab Sample Numbers or	r SDG:	W068	43	
Method/Test/Parameter: Cr+6 RL-WC-003(Aqueous) R	L-WC-004(Solid)				
Review Item		Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (√)
A. Initial Calibration 1. Performed at required frequency with required number of leve	ls?	✓			\
2. Correlation coefficient greater than 0.97?		✓			\cdot \tag{\tau}
3. Initial calibration verification (ICV) analyzed immediately after within 10% of expected?	er calibration and results	✓			V
4. Initial calibration blank (ICB) analyzed immediately after ICV all parameters ≤ reporting limit?	and concentrations of	✓			V
B. Continuing Calibration CCV analyzed at required frequency and all parameters within	10% of expected?	✓			V
2. CCB analyzed at required frequency and all results ≤ reporting	g limit?	✓			V
C. Sample Analysis 1. Were any samples with concentrations above the linear range	diluted and reanalyzed?			✓	V
2. Were all sample holding times met?		✓			V
D. QC Samples 1. All results for the preparation blank below limits?		✓			V
2. LCS percent recovery within 85-115%		✓			V
3. PbCrO ₄ percent recovery within 75-125%?				✓	\vee
4. Sample and Duplicate within 20% (aqueous) or 35% (solid) R	PD?			1	V
5. MS or MS/MSD recoveries within 85-115% (aqueous) or 75-	125% (solid)?	1			V
6. On MS failure, PDMS within 85-115%?				✓	
E. Other 1. Are all nonconformances included and noted?				1	
2. Is the correct date and time of analysis shown?		✓			V
3. Did the analyst sign and date the front page of the analytical r	un?	✓			
4. Correct methodology used?		✓	1		V
5. Transcriptions checked?		√			V
6. Calculations checked at minimum frequency?		V			/
7. Units checked?		✓			V

Comments on any "No" response or list NCM number:



September 11:00,02:0014

Data Review Check List **Hexavalent Chromium**

Batch Number(s): 4224083	Lab Sample Numbers or	· SDG:	W068	43	
Method/Test/Parameter: Cr+6 RL-WC-003(Aqueous)	RL-WC-004(Solid)				
Review Item		Yes (✓)	No (✓)	N/A (✓)	2 nd Level Review (✓)
A. Initial Calibration1. Performed at required frequency with required number of lev	els?	√			V
2. Correlation coefficient greater than 0.97?		✓			V
3. Initial calibration verification (ICV) analyzed immediately at within 10% of expected?	ter calibration and results	✓			V
4. Initial calibration blank (ICB) analyzed immediately after IC all parameters ≤ reporting limit?	V and concentrations of	✓			V
B. Continuing Calibration 1. CCV analyzed at required frequency and all parameters with	in 10% of expected?	✓			V
2. CCB analyzed at required frequency and all results ≤ reporti	ng limit?	✓	ļ		V
C. Sample Analysis 1. Were any samples with concentrations above the linear range	e diluted and reanalyzed?			~	V
2. Were all sample holding times met?		✓			V
D. QC Samples1. All results for the preparation blank below limits?		✓			V
2. LCS percent recovery within 85-115%		✓			V
3. PbCrO ₄ percent recovery within 75-125%?				✓	V
4. Sample and Duplicate within 20% (aqueous) or 35% (solid)	RPD?			✓	V
5. MS or MS/MSD recoveries within 85-115% (aqueous) or 75	5-125% (solid)?	✓			V
6. On MS failure, PDMS within 85-115%?				✓	V
E. Other 1. Are all nonconformances included and noted?				1	~
2. Is the correct date and time of analysis shown?		✓			~
3. Did the analyst sign and date the front page of the analytical	run?	✓			~
4. Correct methodology used?		✓			
5. Transcriptions checked?		✓			V
6. Calculations checked at minimum frequency?		✓			~
7. Units checked?		✓		<u> </u>	V

Comments on any "No" response or list NCM number:

Analyst 1. Salife

Date 8-13-14 2nd Review H. Rahavi Date 8-15-14
Page 71 of 137

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	CO.C.# S14-008-228
		Page 1 of 1
Collector CHPRC	Contact/Requester Karen Waters-Husted	Telephone No. 509-376-4650
SAF No. S14-008	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20
Project Title SURV, AUGUST 2014	Logbook No. HNF-N-506 Let / 52	Ice Chest No. N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	Method of Shipment GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A
Protocol SURV	Priority: 30 Days PRIORITY	Offsite Property No. N/A
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	SPECIAL INSTRUCTIONS	Hold Time Total Activity Exemption: Yes ☑ No □
Sample No. Filter * Date Time No/Ty	No/Type Container Sample Analysis	Holding Time Preservative
B2X7Y1 N W \$ 10 CF 1257 1X5	1x500-mL G/P KPA_UTOT: COMMON MH_CQD	6 Months HNO3 to pH <2
	1x500-mL P TC99_ETVDSK_LSC: COMMON	6 Months HCI to pH <2

Sign
- AUG 1 1 2004 1325
AUG 1 1 20 10 ate/Time
Date/Time
Date/Time
FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION

Page 72 of 137

Company	teau R	emediation.		CHAIN		ODY/SAMP	LE ANALY	OF CUSTODY/SAMPLE ANALYSIS REQUEST	c.o.c.# S14-008-229
									Page 1 of 1
Collector D i Floyd	Plove			Contact	Contact/Requester Karen	Karen Waters-Husted		Telephone No. 509-376-4650	4650
SAF No. CHE	CHPPS4-008	800		Sampling Origin		Hanford Site		Purchase Order/Charge Code	300071ES20
Project Title	SURV	SURV, AUGUST 2014	014	Logbook No.		HNF-N-506 66/51		Ice Chest No. N/A	
Shipped To (Lab)	TestA	TestAmerica Incorporated, Richland	orated, Richla		Method of Shipment GOV	GOVERNMENT VEHICLE	IICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	1		Priority:	30 Days	PRIORITY		Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are Goods Regulations but are not releasable per DOE Order 458.1	E HAZA tive Materrare are not rele	ARDS/REMARK ial at concentrations sasable per DOE Ord	S that are not regulate ler 458.1	***** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / Goods Regulations but are not releasable per DOE Order 458.1	CFR / IATA Dangerous	SPECIAL INSTRUCTIONS		Hold Time Total Act	Total Activity Exemption: Yes 🗹 No 🗀
Sample No.	Filter *	* Date	Time	No/Type Container		Sample Analysis		Holding Time	Preservative
B2X7Y8	z	W 8/11/17	0740	1x1-L P	906.0_TRITIUM_LSC: COMMON	SC: COMMON	MYLOF	6 Months	None
B2X7Y8	z	M	e Mille Way	1x500-mL G/P	KPA_UTOT: COMMON	NON		6 Months	HNO3 to pH <2
B2X7Y8	z	× MODES	, m3	1x500-mL P	TC99_ETVDSK_LSC: COMMON	C: COMMON		6 Months	HCI to pH <2

Relinquished By	Print Sign	Date/Time // 50 Rec	Received By	Print Sign	Date/Time //50	* Matrix *	*
D.E. Floyd		7 7 9		A MIG 11	1000	S E	DS = Drum Solie
Relinquished By		Date/Time 1428 Rec	Received By		Date/Time 1:450	SE = Sedument SO = Solid	DL = Drum Liquids T = Tissue
		AUG 1 1 2011	JiFMERL	(had for 7 ACK	1107 1 1 00V	= TS	WI = Wipe
Relinquished By		Date/Time	Received By	•	Date/Time	11 11 11	L = Liquid V = Vegetation X = Other
Relinquished By		Date/Time	Received By		Date/Time		
						-	
FINAL SAMPLE	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process)	er, per lab procedure, used in proces	(ss	Disposed By		Date/Time	ime
DISPOSITION							

Company	Remediation	CHAIN		DY/SAMPLE	ANALYS	OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# S14-008-230
							Page 1 of 1
Collector D.L. Floyd		Contact/l	Contact/Requester Karen V	Karen Waters-Husted		Telephone No. 509-376-4650	50
SAF No. S14-008	800	Sampling Origin	Origin Hanford Site	l Site		Purchase Order/Charge Code	300071ES20
Project Title SUR	SURV, AUGUST 2014	Logbook No.	No. HNF-N-506 66/51	106/51		Ice Chest No. N/A	
Shipped To (Lab) Test/	TestAmerica Incorporated, Richland		Method of Shipment GOVE	GOVERNMENT VEHICLE		Bill of Lading/Air Bill No. N	N/A
Protocol SURV	Λ	Priority:	30 Days	PRIORITY		Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS	ARDS/REMARKS		S	SPECIAL INSTRUCTIONS	IS Hold Time		Total Activity Exemption: Yes 🗹 No 📋
** ** Contains Radioactive Material at concentrations that are 1 Goods Regulations but are not releasable per DOE Order 458.1	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	r transportation per 49 (CFR / IATA Dangerous				
							*
Sample No. Filter	* Date Time	No/Type Container		Sample Analysis		Holding Time	Preservative
B2X7Y9 N	W 8/11/14 1039	1x1-L P	906.0_TRITIUM_LSC: COMMON		MYLQG	6 Months	None
B2X7Y9 N	ļ	1x500-mL G/P	KPA_UTOT: COMMON	Z		6 Months	HNO3 to pH <2
B2X7Y9 N	M	1x500-mL P	TC99_ETVDSK_LSC. COMMON	COMMON		6 Months	HCI to pH <2

1941120409

Refinquished By	Print Sign	Date/Time 11 50 Rec	Receive M. Hall Print Sign	Date/Time 1/50	Matrix *
D.L. Floyd			CHPRC (CANADA		= Soil DS
Remarkation Sy F.M. Hall	John Market	AUG 1 12014	Triver Color	AUG 1 1 2016	SE = Sedment DL = Lrum Liquids SO = Solid T = Tissue SL = Sludge WI = Wipe
Relinquished By		Date/Time	Received By	Date/Time C	1 > X
Relinquished By		Date/Time	Received By	Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	er, per lab procedure, used in proces	cs) Disposed By		Date/Time

TOTAL COLUMN

CH2MHill Plateau Remediation	lateau	Remediatio		CHA	IN OF CUST	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	ALYSE	S REQUEST	S14-008-231
Company									Page 1 of 1
Collector D.	D.L. Floyd	7		Contac	Contact/Requester Kan	Karen Waters-Husted	Tel	Telephone No. 509-376-4650	650
SAF No.	S14.	S14-008		Samplin	Sampling Origin Hai	Hanford Site	Pur	Purchase Order/Charge Code	300071ES20
Project Title	SUF	SURV, AUGUST 2014	r 2014	Logbook No.		HNF-N-506 66/51	Ice	Ice Chest No. N/A	
Shipped To (Lab)		tAmerica Inco	TestAmerica Incorporated, Richland		Method of Shipment G(GOVERNMENT VEHICLE	Bill	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	λ?		Priority:	y: 30 Days	PRIORITY	00	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS	PLE HAZ	ZARDS/REMAI	RKS			SPECIAL INSTRUCTIONS	Hold Time		Total Activity Exemption: Yes 🗹 No 🗌
** ** Contains Radioactive Material at concentrations that are r Goods Regulations but are not releasable per DOE Order 438.1	oactive Mai out are not r	terial at concentrativeleasable per DOE	ons that are not regul Order 458.1	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR, Goods Regulations but are not releasable per DOE Order 458.1	19 CFR / IATA Dangerous				
Sample No.	Filter	* Date	Time	No/Type Container	Lu Lu	Sample Analysis		Holding Time	Preservative
B2X811	z	W W	1126	1x1-L P	906.0_TRITIUM	906.0_TRITIUM_LSC: COMMON		6 Months	None
B2X811	z	<u></u>		1x1-L P	9310_ALPHABE	9310_ALPHABETA_GPC: COMMON		6 Months	HNO3 to pH <2
B2X811	z	8		1x500-mL G/P	KPA_UTOT: COMMON	NOMIN		6 Months	HNO3 to pH <2
B2X811	z	×		1x500-mL P	TC99_ETVDSK_	TC99_ETVDSK_LSC: COMMON MYLQ]	50	6 Months	HCI to pH <2
ge									

	Solids	= Dium Laquads = Tissue = Wipe = I ionid	tation		
-	* strix * DS	1 M 1	× < ı		Date/Time
	S - = Soil	SO = Solid SL = Shidge Ul = Shidge	W = Wates O = Oil A = Air		Ω
	AUG 1 1 2014 // 56	Date/Time 1995	Date/Time	Date/Time	
	Print Sign	my Lynn			Disposed By
	Received By F.M. Hall	Received By J. Fryke 12 (Received By	Received By	(ss
D 0-11-14	THE CONTROL OF RECEIVE	AUG 1 1 2014	Date/Time	Date/Time	; per lab procedure, used in proce
7	Print Sign	all Allenda			FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION
	Relinquished By P.	Relinguistering F.M. Hall	Reimquished By TIF IC	Relinquished By	FINAL SAMPLE DISPOSITION

						1					Se	pt	em	ber 16,
CO.C.# S14-008-232	Page 1 of 1	.650	300071ES20		N/A	N/A	Total Activity Exemption: Yes 🗹 No 🗀		Preservative	None	HNO3 to pH <2	HNO3 to pH <2	HCI to pH <2	
SIS REQUEST		Telephone No. 509-376-4650	Purchase Order/Charge Code	Ice Chest No. N/A	Bill of Lading/Air Bill No.	Offsite Property No.	Hold Time Total Acti		Holding Time	6 Months	6 Months	6 Months	6 Months	
N OF CUSTODY/SAMPLE ANALYSIS REQUEST		Contact/Requester Karen Waters-Husted	Origin Hanford Site	No. HNF-N-506 66 / 5 /	Method of Shipment GOVERNMENT VEHICLE	30 Days PRIORITY	SPECIAL INSTRUCTIONS Hold	CFR / IATA Dangerous	Sample Analysis	906.0_TRITIUM_LSC: COMMON MYLQK	9310_ALPHABETA_GPC: COMMON	KPA_UTOT: COMMON	TC99_ETVDSK_LSC: COMMON	
CHAIN		Contact	Sampling Origin	Logbook No.	proposition of	Priority:		** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	No/Type Container	1x1-L P	1x1-L P	1x500-mL G/P	1x500-mL P	
					ited, Richlan			are not regulated : 58.1	Time	1176	-			
ediation				SURV, AUGUST 2014	TestAmerica Incorporated, Richland		S/REMARKS	concentrations that e per DOE Order 4	Date	Z. Z.				
Rem		ත	S14-008	V, A	tAme	\ \ \	ARD	erial at eleasabl	*	≥	≥	≥	>	_
tean		D.L. Floyd	PRE S14	SUR	Test	SURV	E HAZ	ctive Mat are not r	Filter	z	z	z	z	-
CH2MHill Plateau Remediation	Canal Canal	Collector D.L.	SAF No.	Project Title	Shipped To (Lab)	Protocol	POSSIBLE SAMPLE HAZARDS/REMARKS	** ** Contains Radioactive Material at concentrations that are r Goods Regulations but are not releasable per DOE Order 458.1	Sample No.	B2X812	B2X812	B2X812	3B2X812	ge 76 of 137

744 120409 W06843

Relinquished By	Print Sign	AIR 4 Dagatime (150 Rece	Received By Holl	Sign	Date/Time //52	* Matrix	* x
D.L. Floyd			CHPRC ON THE	Market Market		П	
Relinquished By		AUG 1 2014 TET	Received By T.F. Pes 2	Le Kit	AUG 1 1 2014 St. St.	SC = Sediment SO = Solid SL = Studge	DL = Drum Liquids T = Tissue WI = Wipe
Relinquisticatify C		Date/Time	Received By		Date/Time	W = Water Q = Oil A = Air	L = Liquid V = Vegetation X = Other
Relinquished By		Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION	т, per lab procedure, used in proce	(ss	Disposed By		Date/Time	Date/Time

PRINTED 0 6/25/2014

Test	America September 12 dist
	Cime Received: Stuff 1450 Container GM Screen Result: (Airlock) cpm Initials [7] Sample GM Screen Result (Sample Receiving) cpm Initials [8]
Client	SDG#: WO 6843 SAF#: S14-008 NA[]
Lot Ni	umber: J4H120409
	of Custody # 514-008-228;229;230;231;232
Chain	of Custody # 311 000 220,229, 400,231, 232
Shippi	ing Container ID or Air Bill Number: 1 And de Civ. NA [Ry
	les received inside shipping container/cooler/box Yes Continue with 1 through 4. Initial appropriate response. No [] Go to 5, add comment to #16.
1.	Custody Seals on shipping container intact? Yes [] No [] No Custody Seal
2.	Custody Seals dated and signed? Yes [] No [] No Custody Seal
3.	Cooler temperature: Vermiculite/packing materials is NA [] Wet [] Dry []
4.	Vermiculite/packing materials is NA Wet [] Dry []
5.6.7.	Chain of Custody record present? Yes [] No [] Number of samples received (Each sample may contain multiple bottles): Containers received: 10 x500 mlp; 6 x lp
8.	Sample holding times exceeded? NA[] Yes[] No[]
9.	Samples have:tapehazard labelscustody sealsappropriate sample labels Matrix:A (FLT, Wipe, Solid, Soil)I (Water)S (Air, Niosh 7400)T (Biological, Ni-63)
10.	Matrix:A (FLT, Wipe, Solid, Soil)
11.	Samples: are in good conditionare leakingare brokenhave air bubbles (Only for samples requiring no head space)Other
12.	Sample pH appropriate for analysis requested Yes No No No No No No No No No No No No No
13.	Were any anomalies identified in sample receipt? Yes [] No []
14.	Description of anomalies (include sample numbers): NA]
15.	Sample Location, Sample Collector Listed on COC? * Yes P] No P] *For documentation only. No corrective action needed.
16.	Additional Information:
[]	Client/Courier denied temperature check. [] Client/Courier unpack cooler.
	Sample Check-in-List completed by Sample Custodian: Signature: Date:

LS-023 Rev. 17, 05/13

Project Manager_

Client Notification needed? Yes [] No

MLNo action necessary; Process as is

Date_

8/12/14

Date:
By:
Person contacted:

S	S W King		CHAI	N OF CU	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		N KECOENT	
	Kina	** **					l	Page 1 of 1
5			Contact/]	Contact/Requester	Karen Waters-Husted	Tel	Telephone No. 509-376-4650	550
	114-035		Sampling Origin		Hanford Site	Pur	Purchase Order/Charge Code	300071ES20
rroject mile 10	100KR4, AUGUST 2014	. 2014	Logbook No.		F\$ / 60] 905-N-4NH	Ice	Ice Chest No. N/A	
Shipped To (Lab) Te	TestAmerica Incorporated, Richland	oorated, Richland		Method of Shipment	GOVERNMENT VEHICLE	Bill	Bill of Lading/Air Bill No.	N/A
Protocol CE	CERCLA		Priority:	30 Days	PRIORITY	ijO	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / Goods Regulations but are not releasable per DOE Order 458.1	ZARDS/REMARK aterial at concentrations releasable per DOE Or.	CS that are not regulated for der 458.1	or transportation per 49 (CFR / IATA Dangerous		S Hold Time I samples submitted und Scott Fitzgerald, CHPI	te Total Activ nder A, G, I, S, and W14 SAFs into PR.C.	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes 🗹 No All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.
Sample No. Filter	* Date	Time	No/Type Container		Sample Analysis		Holding Time	Preservative
B2X605 N	h1-21-8 M	1060	1x500-mL aG	7196_CR6: COMMON	LCM/THUN NOMMOS		24 Hours	Cool <=6C
	AUG 1 2 2014	discon.						

74 #1720419

Relinquished By: no	Print // Sign	Alf: 17 7 Page/Time	Received By Print Sign	Date/Time	Matrix *	
CHPRO	The state of the s	48-2-4 mg 10 27	MA When maruline	AUG 1 / 2014 (139	= Soil DS =	- spi
Relinquished By		até/fithe	Received By	Date/Time]] - 	spm
MANNET	MAWATE MOUSE.	8-12-14 120	() // T. F.	8-12-14 1430	SL = Sludge WI = Wipe	
Relinquished By			Reddived By	. Date/Time	= Water L = = Oil V =	
					A = Air X = Other	
Relinquished By		Date/Time	Received By	Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Retun	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	ss) Disposed By		Date/Time	
PRINTED 0 6/25/2014	4				A-6004-842 (REV 2)	

Page 78 of 137

	: 'PGW SDG#: W06843 SAF#: IH-035 NA[] umber: JH 120419
	of Custody # <u>I14-035-06</u>
Shippi	ing Container ID or Air Bill Number:
Sampl	les received inside shipping container/cooler/box Yes [] Continue with 1 through 4. <u>Initial</u> appropriate response. No [] Go to 5, add comment to #16.
1.	Custody Seals on shipping container intact? Yes [] No [] No Custody Seal
2.	Custody Seals dated and signed? Yes [] No [] No Custody Seal
3.	Cooler temperature: 1.3 °CIG NA []
4.	Vermiculite/packing materials is NA] Wet [] Dry []
Item 5	through 16 for samples. <u>Initial</u> appropriate response. Chain of Custody record present? Yes No []
6.	Number of samples received (Each sample may contain multiple bottles):
7.	Containers received: 1X500mlag
8.	Sample holding times exceeded? NA[] Yes[] No 3]
9.	Samples have:tapehazard labelscustody seals \appropriate sample labels
10.	Matrix:A (FLT, Wipe, Solid, Soil)I (Water)S (Air, Niosh 7400)T (Biological, Ni-63)
11.	Samples: are in good condition are leaking are broken have air bubbles (Only for samples requiring no head space) Other
12.	Sample pH appropriate for analysis requested Yes [] No [] NA [] (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO3 added and pH after addition on table)
13.	Were any anomalies identified in sample receipt? Yes [] No []
14.	Description of anomalies (include sample numbers): NA []
15.	Sample Location, Sample Collector Listed on COC? * Yes \[\] No [] *For documentation only. No corrective action needed.
16.	Additional Information: W 14 W 3/13/14
[]	Client/Courier denied temperature check. [] Client/Courier unpack cooler.
	Sample Check-in List completed by Sample Custodian: Signature: Date: 8.12-14
	Client Notification needed2 Yes [] North Date:
	By: Rerson contacted:
	M. No action necessary; process as is
	Project Manager Date 8 13 14

LS-023 Rev. 17, 05/13

CH2MHill Pla	CH2MHill Plateau Remediation						C.O.C.#
Company			CHAI	NOF CUST	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	YSIS REQUEST	114-020-077
							Page 1 of 1
Collector	S.W. King CHPRC		Contact/Requester		Karen Waters-Husted	Telephone No. 509-376-4650	0
SAF No.	114-036		Sampling Origin		Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	2UP1, AUGUST 2014	14	Logbook No.		78/99/99	Ice Chest No. N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland	orated, Richland		Method of Shipment GO	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A	A
Protocol	CERCLA		Priority: 30	30 Days	PRIORITY	Offsite Property No. N/A	A
POSSIBLE SAMPI	POSSIBLE SAMPLE HAZARDS/REMARKS				SPECIAL INSTRUCTIONS	Hold Time Total Activity	Total Activity Exemption: Yes 🗹 No 🗌
** ** Contains Radioa Goods Regulations but	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	hat are not regulated for er 458.1	r transportation per 49 C	FR / IATA Dangerous			
Sample No.	Filter * Date	Time	No/Type Container		Sample Analysis	Holding Time	Preservative
B2X6J3	N 100 1 2 2014	1057	2x4-L G/P	1129LL_SEP_LEP	1129LL_SEP_LEPS_GS_LL. COMMON BAI \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	A 6 Months	None



Relinquished By	Pring Sign	Date/Time // 30 Received By	Received By Print	E.	Date/Time	* Matrix	*
	Mary Const	AUG 1 2 2014 (12)	MAINET MARLES	_	AUG 12 2014 (25)	SZ II	
Relinquished By			Received By		Date/Time	# ! # S	DL = Drum Liquids
national mail		8-12-14 (450	15.62 Karter	Z	82 6-51-8 8	SL = Sludge	MI = Wipe
Relinquished By			Received By		Date/Time		L = Liquid V = Vegetation X = Other
telinquished By		Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to c	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time	ime
PRINTED O 6/25/2014						A-6004-842 (REV 2)	(REV 2)

PRINTED O 6/25/2014

CH2MHill Plateau Remediation Company	ateau R	emediation		CHAIN		OF CUSTODY/SAMPLE ANALYSIS REQUEST	ALYSIS F	EQUEST	CO.C.# I14-036-031
•								ı	Page 1 of 1
Collector	S.W. King	තු,		Contact/1	Contact/Requester Kare	Karen Waters-Husted	Telephone No.	ne No. 509-376-4650	4650
SAF No.	114-036	98		Sampling Origin		Hanford Site	Purchas	Purchase Order/Charge Code	300071ES20
Project Title	2UP1,	2UP1, AUGUST 2014	[4	Logbook No.		HNF-N-506 (26/1867)	Ice Chest No.	t No. N/A	
Shipped To (Lab)	TestA	TestAmerica Incorporated, Richland	orated, Richla		Method of Shipment GO	GOVERNMENT VEHICLE	Bill of L	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	LA		Priority:	30 Days	PRIORITY	Offsite I	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS	LE HAZA	RDS/REMARKS				SPECIAL INSTRUCTIONS	Hold Time	Total Act	Total Activity Exemption: Yes 🗹 No
** ** Contains Radioactive Material at concentrations that are Goods Regulations but are not releasable per DOE Order 458.	active Materia it are not relea	al at concentrations thasable per DOE Order	nat are not regulate r 458.1	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	CFR / IATA Dangerous				
Sample No.	Filter *	Date	Time	No/Type Container		Sample Analysis	I	Holding Time	Preservative
B2X6M9	Z	WIE 19 901 100 5	1225	2x4-L G/P	1129LL SEP LEP	1129LL SEP LEPS GS LL: COMMON No 1120CL	76	6 Months	None

548140432

Page 81 of 137

CH2MHill Pla Company	CH2MHill Plateau Remediation Company	-	CHAIL	N OF CUST	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	LYSIS REQUEST	c.o.c.# I14-036-032
	2 N						Page 1 of 1
Collector	CHPRC		Contact/Requester		Karen Waters-Husted	Telephone No. 509-376-4650	50
SAF No.	114-036		Sampling Origin		Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	2UP1, AUGUST 2014	014	Logbook No.		HNF-N-506 68 / 82	Ice Chest No. N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland	oorated, Richlan		Method of Shipment GOV	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA		Priority: 30	Days	PRIORITY	Offsite Property No.	N/A
POSSIBLE SAMPL	POSSIBLE SAMPLE HAZARDS/REMARKS	S			SPECIAL INSTRUCTIONS	Hold Time Total Activi	Total Activity Exemption: Yes 🗸 No
** ** Contains Radioac Goods Regulations but	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	that are not regulated der 458.1	for transportation per 49 C	FR / IATA Dangerous			
							-
Sample No.	Filter * Date	Time	No/Type Container		Sample Analysis	Holding Time	Preservative
B2X6N0	N MG 17 MM 12 20	12%	2x4-L G/P	1129LL_SEP_LEPS	1129LL_SEP_LEPS_GS_LL: COMMON WAILY OF YOUR	6 Months	None

6540414hC

	•							
Relinquished By	Print // Sign	A 116 A Date/Time	Received By	Print Sign	Date/Time	Matrix *	ix *	
	Mark Sand	1 2 1014/3/5/	MALLEY.	matalize	AUG 122014/315	S.		olids
Relinquished By		Date/Time	Received By /		Date/Time	S SE		iquids
MAINTAINAN	Malent	8-12-14 1420	1 /n/ - /m	- J.Firesi TAUL	8-12-14 1420	II	WI = Wipe	
Relinquished By		, Date/Time	Received By		Datè/Time	W = Water $O = Oil$ $A = Air$	L = Liquid V = Vegetation X = Other	. no
Relinquished By		Date/Time	Received By	·	Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process DISPOSITION	ess)	Disposed By		Date	Date/Time	

A-6004-842 (REV 2)

PRINTED 0 6/25/2014

Page 82 of 137

ber 16, 2014

S.W. King Child PRC CHPRC Contact/Requester Karen Waters-Husted Telephone No. 56 Sampling Origin Hanford Site Purchase Order/Char 114-036 2UP1, AUGUST 2014 Logbook No. HNF-N-506 QS/S2 Ice Chest No. No. Telephone No. 1 In the Charter of Content of Shipment GOVERNMENT VEHICLE Ice Chest No. No. 1 In the Charter of Chest No. 1 In the Charter of Chest No. 1 In the Charter of Chest No. 1 In the Charter of Charter of Chest No. 1 In the Charter of Ch	CHPRO	CH2MHill Plateau Remediation Company	lateau	Remediatio	end Ran	CHAI	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	SAMPLE ANAI	LYSIS REQU	EST	C.O.C.# I14-036-030
S. W. King Contact/Requester Karen Waters-Husted Telephone No. 5 CHPBC 114-036 Sampling Origin Hanford Site Purchase Order/Char 114-036 114-036 Rechest No. Incephone No. Incephone No. o(Lab) TestAmerica Incorporated, Richland Method of Shipment GOVERNMENT VEHICLE Bill of Lading/Air Bill CERCLA Priority: 30 Days PRIORITY Offsite Property No. E SAMPLE HAZANDS/REMARKS Special Instructions that are not regulated for transportation per 49 CFR / IATA Dangerous label on releasable per DOE Order 458.1 Special Instructions Holding Time No. Filter * Date Time No/Type Container 141-L P 906.0_TRITIUM_LSC: COMMON Holding Time No. W V V V V V Months No. W V V V V V Months No. W V V V V V V	S.W. King Contact/Requester Karen Waters-Husted Telephone No. 509-376-4650 CHPBC Sampling Origin Handrod Site Hardrod Site Parchase Order/Charge Code 300071ES20 the 2UP1, AUGUST 2014 Logbook No. HNF-N-506/QS / \$2. Fee Chest No. Order/Charge Code 300071ES20 clash Instruction Incorporated, Richland Method of Shipment GOVERNMENT VEHICLE Bill of Lading/Air Bill No. N/A FIRE TAXARDS/REMARKS PROFILE HAZARDS/REMARKS No. Filter Date Trine No. VA PROFILE HAZARDS/REMARKS Holding Time Proservative No. Filter Date Trine No. VAyer Container Semple Analysis Holding Time Proservative No. Filter Date Trine No. VAyer 1.7 Mill Analysis Holding Time Proservative No. W M Analysis Holding Time Months None No. W Analysis Analysis Holding Time None No. M W								.		Page 1 of 1
114-036 11	the 2UP1, AUGUST 2014 I = 24 August Augu		S.W. K	<u> </u>		Contact		-Husted	Telephone No.	509-376-40	650
tele 2UP1, AUGUST 2014 Logbook No. HNF-N-506 QS / S2 Ice Chest No. No. Ice Chest No. No. Filter * Date Time No/Type Container Time No. Time No/Type Container Time No. Time No/Type Container Time No. Time No/Type Container Sample Analysis Holding Time Holding Time Holding Time Months No. Filter * Date Time No/Type Container Sample Analysis Holding Time No. Filter * Date Time No/Type Container Sample Analysis Holding Time No. W Time No/Type Container Sample Analysis Holding Time No. W Time No/Type Container Sample Analysis Holding Time No. W Time No/Type Container Sample Analysis Holding Time No. W Time No/Type Container Sample Analysis Holding Time No. W Tim	1		114-	036		Sampling			Purchase Order/C	harge Code	300071ES20
Cab TestAmerica Incorporated, Richland Method of Shipment GOVERNMENT VEHICLE Bill of Lading/Air Bi	CERCIA Test America incorporated, Richland Method of Shipment GOVERNMENT VEHICLE Bill of Lading/Air Bill No. N/A	Project Title	2UP	1, AUGUST	2014	Logpool		. 83	Ice Chest No.	N/A	
E SAMPLE HAZARDS/REMARKS PRIORITY SPECIAL INSTRUCTIONS Hold Time ins. Radioactive Material at concentrations but are not releasable per DGE Order 458.1 SPECIAL INSTRUCTIONS Hold Time No. Filter * Date Time No/Type Container Sample Analysis Holding Time No. Filter * Date Time No/Type Container 906.0_TRITIUM_LSC: COMMON 6 Months No. W W Tx1-LP 906.0_TRITIUM_LSC: COMMON 6 Months No. W W Tx500-mL G/P KPA_UTOT: COMMON 6 Months No. W Tx500-mL G/P Tx500-mL P Tx99_ETVDSK_LSC: COMMON 6 Months	C.S.AMPLE HAZARDS/REMARKS Priority: 30 Days PRIORITY Rold Time Offsite Property No. N/A instraction bind are not releasable per DOE Order 43.8.1 A Date Time No.Type Container Sample Analysis Holding Time Preservative No. Filter * Date Tx1-LP 906.0_TRITIUM_LSC COMMON 6 Months None No. W V Tx500-mL G/P 1750L_SEP_LEPS_GS_LL: COMMON 6 Months None No. W V Tx500-mL G/P Tx500-mL P T	Shipped To (Lab)		America Inco	orporated, Ricl		ent	ENT VEHICLE	Bill of Lading/Air		N/A
E SAMPLE HAZARDS/REMARKS statioactive Material at concentrations that are not releasable per DOE Order 458.1 No. Filter * Date Time No/Type Container Bo6.0_TRITIUM_LSC: COMMON Holding Time No. Will 177ft 100.2 1x1-LP 906.0_TRITIUM_LSC: COMMON 6 Months No. Will 127ft 1x500-mL G/P KPA_UTOT: COMMON 6 Months No. Will 127ft 1x500-mL G/P KPA_UTOT: COMMON 6 Months No. Will 127ft 1x500-mL G/P TC99_ETVDSK_LSC: COMMON 6 Months	SAMPLE HAZARDS/REMARKS List at Date Time No/Type Container No/Typ	Protocol	CER	CLA		Priority	30 Days	UTY	Offsite Property N		N/A
No. Filter * Date Time No/Type Container Sample Analysis Holding Time N W 1x1-L P 906.0_TRITIUM_LSC: COMMON 6 Months N W 1x500-mL G/P 1729LL_SEP_LEPS_GS_LL: COMMON 6 Months N W 1x500-mL G/P KPA_UTOT: COMMON 6 Months N W 1x500-mL G/P TC99_ETVDSK_LSC: COMMON 6 Months	No. Filter * Date Time No/Type Container Sample Analysis Holding Time N W 1x1-L P 906.0_TRITIUM_LSC: COMMON 6 Months N W 1x500-mL G/P 1129LL_SEP_LEPS_GS_LL: COMMON 6 Months N W 1x500-mL G/P KPA_UTOT: COMMON 6 Months N W W 6 Months 6 Months	POSSIBLE SAMI ** ** Contains Radic Goods Regulations b	PLE HAZ	ZARDS/REMAR erial at concentratio eleasable per DOE (UKS nns that are not regul Order 458.1	lated for transportation per 49			Hold Time	Total Activ	ity Exemption: Yes 🗹 No
N W Tx1-LP 906.0_TRITIUM_LSC: COMMON 6 Months N W Tx500-mL G/P 1129LL_SEP_LEPS_GS_LL: COMMON 6 Months N W Tx500-mL G/P KPA_UTOT: COMMON 6 Months N M Tx500-mL P TC99_ETVDSK_LSC: COMMON 6 Months	N W LX1-LP 906.0_TRITIUM_LSC: COMMON 6 Months N W TX500-mL G/P 1129LL_SEP_LEPS_GS_LL: COMMON 6 Months N W TX500-mL G/P KPA_UTOT: COMMON 6 Months N MS 12 7fft TX500-mL P TC99_ETVDSK_LSC: COMMON 6 Months	Sample No.	Filter		Time	No/Type Container	Sample	e Analysis	Holding Tir	ne	Preservative
N W 2x4-L G/P 1129LL_SEP_LEPS_GS_LL: COMMON 6 Months N W V <td>N W Tx500-mL G/P 1129LL_SEP_LEPS_GS_LL: COMMON 6 Months N W V</td> <td>B2X6M3</td> <td>z</td> <td>WIE 1779</td> <td>11 1022</td> <td></td> <td>906.0_TRITIUM_LSC: COMA</td> <td>MON</td> <td>6 Month</td> <td>S</td> <td>None</td>	N W Tx500-mL G/P 1129LL_SEP_LEPS_GS_LL: COMMON 6 Months N W V	B2X6M3	z	WIE 1779	11 1022		906.0_TRITIUM_LSC: COMA	MON	6 Month	S	None
N W Tx500-mL G/P KPA_UTOT: COMMON 6 Months N ME 12 7011 Ax 7 7 1x500-mL P TC99_ETVDSK_LSC: COMMON FXLIMAN 6 Months	N W 7 1x500-mL G/P KPA_UTOT: COMMON 6 Months N MS 12 7/114 ND 2 1x500-mL P TC99_ETVDSK_LSC: COMMON YNLYMM 6 Months	B2X6M3	z	X			1129LL_SEP_LEPS_GS_LL:	COMMON	6 Month	S	None
N ME 12 7011 N572 1x500-mLP TC99_ETVDSK_LSC: COMMON NILLMAN 6 Months	N MS 12 7914 NO 22 1x500-mLP TC99_ETVDSK_LSC: COMMON MYLMM & 6 Months	B2X6M3	z	>	>	1x500-mL G/P	KPA_UTOT: COMMON	Your and Advantage of the Parks	6 Month	v	HNO3 to pH <2
		B2X6M3	z	ALK 12711			TC99_ETVDSK_LSC: COMIN			s	HCI to pH <2

548 140432 CU06843

Relinquished By	Print Page		Received By Print	Sign	Date/Time	Matrix *	rix *
S.W. King	Contraction of the Contraction o	AUG 17 2014 1139	MALDISTONADOUS	•	AUG 12 2014 1139	U	DS = Drum Solids
Relinquished By		Date/Time	Received By		Date/Time	SE = Sediment SO = Solid	
MALSICAL	nazistie	8-12-14 1430	かなりからしまる	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	8-12-14 1430	SI = Sludge	WI = Wipe
Relinquished By		Date/Time	Received By		Date/Time	11 II II	L = Liquid V = Vegetation X = Other
Relinquished By		Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to cu	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION	ess) D.	isposed By		Date	Date/Time

PRINTED O 6/25/2014

A-6004-842 (REV 2)

	Sample Check-in List September 16, 2014
Date/T	Container GM Screen Result: (Airlock) to cpm Initials [] Sample GM Screen Result (Sample Receiving) to cpm Initials []
Client:	
Lot Nu	imber: <u>544140432</u>
Chain	of Custody # II4-036-000;030;030;030;031
Shippi	ng Container ID or Air Bill Number: Land L.V. NA [AY
Sample	es received inside shipping container/cooler/box Yes [] Continue with 1 through 4. <u>Initial</u> appropriate response. No []] Go to 5, add comment to #16.
1.	Custody Seals on shipping container intact? Yes [] No [] No Custody Seal
2.	Custody Seals dated and signed? Yes [] No [] No Custody Seal
3.	Cooler temperature:
4.	Vermiculite/packing materials is NA Wet [] Dry []
Item 5 5.	through 16 for samples. <u>Initial</u> appropriate response. Chain of Custody record present? Yes 7 No []
6.	Number of samples received (Each sample may contain multiple bottles):
7.	Containers received: 4440; 2 x 500 mp; 1xCp
	B8.14.14 X
8.	Sample holding times exceeded? NA[] Yes[] No []
9.	Samples have:tapehazard labelscustody seals &appropriate sample labels
10.	Matrix:A (FLT, Wipe, Solid, Soil) I (Water)S (Air, Niosh 7400)T (Biological, Ni-63)
11.	Samples: are in good condition are leaking are broken have air bubbles (Only for samples requiring no head space) Other
12.	Sample pH appropriate for analysis requested Yes No No No NA NA NA NA NA NA NA NA NA NA NA NA NA
13.	Were any anomalies identified in sample receipt? Yes [] No []
14.	Description of anomalies (include sample numbers): NA []
15.	Sample Location, Sample Collector Listed on COC? * Yes No [] *For documentation only. No corrective action needed.
16.	Additional Information: W
[](Client/Courier denied temperature check. [] Client/Courier unpack cooler.
	Sample Check-in List completed by Sample Custodian: Signature: Date: Signature:
	Client Notification needed? Yes No Date: By:
	Person contacted:
	Project Manager Date 8/16/14

CH2MHill Pla	CH2MHill Plateau Remediation		CHAIN	TOLO NO N	OF CHISTODY/SAMPI E ANAI VSIS BEOHEST	L VSIC DEOLIECT	co.c.# I14-035-055
Company					OF IDEAL LE AND		Page 1 of 1
Collectok.C. Patterson	erson		Contact	Contact/Requester Kare	Karen Waters-Husted	Telephone No. 509-376-4650	0
SAF No.	I14-035		Sampling Origin		Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100KR4, AUGUST 2014	2014	Logbook No.		HNF-N-506 64 /93	Ice Chest No. NIK & 13	AN 8-13-17 6/25-355
Shipped To (Lab)	TestAmerica Incorporated, Richland	orated, Richla		Method of Shipment GO	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A	A
Protocol	CERCLA		Priority:	30 Days	PRIORITY	Offsite Property No. N/A	A
POSSIBLE SAMPI	POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not resultated for transportation ner 49 CFR / IATA Dancerous	S that are not regulated	for transportation ner 49 (CFR / IATA Dangerons	SPECIAL INSTRUCTIONS All Labs excent WSCF: Barch all camples	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No No I sand WI4 SAFs into one SDG not to exceed SDG closure	Total Activity Exemption: Yes V No 14.8AFs into one SDG not to exceed SDG closure
Goods Regulations but	Goods Regulations but are not releasable per DOE Order 458.1	ler 458.1			of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	gerald, CHPRC.	
Sample No.	Filter * Date	Time	No/Type Container		Sample Analysis	Holding Time	Preservative
B2X5X6	WAIIG 13 211 CQUZ	1 C027	1x500-mL aG	7196_CR6: COMMON	NON . NON	24 Hours	Cool <=6C



J4H130433 JF Elish make ucc6843

Relinquished By	Print Sign	Date/Time	Received By	Date/Time	Matrix *	*
CHPRC V		AUG 13 2014 11320		AUG 13 2014 1120		DS = Drum Solids
Relinquished By	R.D.W.C.D.	AUG 1 3 2014 1500	Greened By, Jan T. Friese TAVE AUG 13 2014	AUG 1 3 2014 1500	SE = Sediment SO = Solid SL = Shudge	DL = Drum Liquids T = Tissue WI = Wipe
Relinquished By	f	Date/Time	Received By	Date/Time	W = Water $O = Oil$ $A = Air$	L = Liquid V = Vegetation X = Other
Relinquished By		Date/Time	Received By	Date/Time		
INAL SAMPLE DISPOSITION.	sposal Method (e.g., Return to cust	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION.	ss) Disposed By		Date/Time	ne
PRINTED O 6/25/2014					A-6004-842 (REV 2)	REV 2)

CH2MHill Pla Company	CH2MHill Plateau Remediation Company		CHAIN OF C	OF CUSTODY/SAMPLE ANALYSIS REQUEST	ALYSIS REQUEST	C.O.C.# I14-035-062
						Page 1 of 1
Collector J.F	J.R. Aguilar CHPRC		Contact/Requester	Karen Waters-Husted	Telephone No. 509-376-4650	05
SAF No.	114-035		Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100KR4, AUGUST 2014	4	Logbook No. HN	HNF-N-506 66 / 53	Ice Chest No. N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland	ed, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N.	N/A
Protocol	CERCLA		Priority: 30 Days	PRIORITY	Offsite Property No. N.	N/A
POSSIBLE SAMPL ** ** Contains Radioact Goods Regulations but a	POSSBELE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	e not regulated for transpoi	rtation per 49 CFR / IATA Dan		SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes 🗹 No 🗌 All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.	Total Activity Exemption: Yes 🗹 No 🗌
	4	·		Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	itzgerald, CHPRC.	
Sample No.	Filter * Date	Time No/Type	No/Type Container	Sample Analysis	Holding Time	Preservative
B2X610	N W 8-13-14 0946		1x1-L P ; 906.0_TRIT	906.0_TRITIUM_LSC. COMMON MYLSA	A 6 Months	None

J4H130433 W6843

Alic 13 784 1124
11 #JA7 6 DOW
AUG 1 3 2014 (500)
Date/Time
Date/Time
FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION

Page 86 of 137

r 16, 2014

Contact/Requester
Sampling Origin
Logbook No.
Method of Shipment
Priority:
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / Goods Regulations but are not releasable per DOE Order 458.1
No/Type Container
1x1-L P *
2x1-L G/P *
3x1-L G/P '
3x1-L G/P 1
1x500-mL P :

J44130433

Matrix *	S = Soil DS = S	Date/Time SO = Solid T = Lyum Lyquids SO = Solid T = Tissue SL = Shudge WI = Wipe	= Water L = = Oil V = X = Xi	Date/Time	Date/Time	(0) (111) (100) x
Print Sign Sign Da	13:00(00)	Sect that AUG 13 2014 (SS)	Dž	Da	Disposed By	
Alife 13 7011 1120 Received By La Well	Office A	AUG 13 2014 155 3.622 k See V	Date/Time Received By	Date/Time Received By	procedure, used in process)	
Print Sign Allf.	NO.	A DIWAR			Disposal Method (e.g., Return to customer, per lab procedure, used in process)	
Relinquished By K.C. Patterson	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Relinquished By	Relinquished By	Relinquished By	FINAL SAMPLE DISPOSITION	

CH2MHill Pla Company	CH2MHill Plateau Remediation Company		CHAIN OF CUS	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.	c.# I14-035-069
						Page 1 of 1
Collector K.C. Patterson	atterson		Contact/Requester Ka	Karen Waters-Husted	Telephone No. 509-376-4650	-
SAF No.	CHP46 114-035		Sampling Origin Ha	Hanford Site	Purchase Order/Charge Code 30007	300071ES20
Project Title	100KR4, AUGUST 2014	2014	Logbook No. HNF-N-	HNF-N-506 $(4/92)$	Ice Chest No. N/A	-
Shipped To (Lab)	TestAmerica Incorporated, Richland	orated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A	
Protocol	CERCLA		Priority: 30 Days	PRIORITY	Offsite Property No. N/A	
POSSIBLE SAMPI	POSSIBLE SAMPLE HAZARDS/REMARKS	100		SPECIAL INSTRUCTIONS Ho	Hold Time Total Activity Exemption: Yes 🗹 No	r. Yes 🗸 No
** ** Contains Radioa Goods Regulations but	** ** Contains Radioactive Material at concentrations that are l Goods Regulations but are not releasable per DOE Order 458.1	hat are not regulated fo er 458.1	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	exceed SDG closure
Sample No.	Filter * Date	Time	No/Type Container	Sample Analysis	Holding Time Pres	Preservative
B2X634	N WAUG 13 2014 1045	1045	1x500-mL aG r 7196_CR6: COMMON	MYL&D	24 Hours Co	Cool <=6C

JYH 13CH33 UNO(843

Matrix * S = Soil DS	SE = Sediment DL = Drum Laquids SO = Solid T = Tissue SL = Sludge WI = Wipe	W = Water L O = Oil V A = Air X	J. C.	Date/Time	A-6004-842 (REV 2)
Received By D. Well C. Print O. Sign Sign Date/Time CHPRC C. Print O. O. O. O. O. O. O. O. O. O. O. O. O.	Received By A J. Frees THUK AUG 132011 (500)	Date/Time	Received By Date/Time	Disposed By	
Print Sign Date/Time Reco	A Date/Time Date/Time AUG 13 2011 / 900	Date/Time Reco	Date/Time Reco	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	
Relinquished By K.C. Patterson CHPBC	Relinquished By	Relinquished By	Relinquished By	FINAL SAMPLE DISPOSITION	PRINTED 0 6/25/2014

CH2MHill Pla	CH2MHill Plateau Remediation	CHAIN	OF CITSTO	OF CHSTODY/SAMPLE ANALYSIS BEOLIFST	VSIS REOTIFST	CO.C.# I14-035-071
Company				OF STOUTS AND ASSISTA		Page 1 of 1
Collector K.C. Patterson), Patterson	Contact/Requester		Karen Waters-Husted	Telephone No. 509-376-4650	4650
SAF No.	114-035	Sampling Origin	in Hanford Site	rd Site	Purchase Order/Charge Code	300071ES20
Project Title	100KR4, AUGUST 2014	Logbook No.	HNF-N-506	HNF-N-506 (4/93)	Ice Chest No. N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment		GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority: 3	30 Days P	PRIORITY	Offsite Property No.	N/A
POSSIBLE SAMP	POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS	Hold Time Total Ac	Total Activity Exemption: Yes 🗹 No 🗌
** ** Contains Radioa Goods Regulations bu	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	ransportation per 49 CFR /		All Labs except WSCF: Batch all samples submitted under of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	nto one SDG, not to exceed SDG closure
Sample No.	Filter * Date Time No	No/Type Container		Sample Analysis	Holding Time	Preservative
B2X641	7 7 7 8 5 7 9 1 N Z	1x500-mL aG 719	7196_CR6: COMMON	JS7hW NO	24 Hours	Cool <=6C

J44130433

Matrix * DS = Drum Solids	유용당	= Water L = = Oil V = Air X = =		Date/Time
Sign AUG 13 2014 /9	Lither THE MIL13 MIL 1500	Date/Time	Date/Time	disposed By
Received By LD Wall	Rocard By J. FIRE	eckeived By	Received By	I
Sign AUG 1 3 7014 (GA)	<u> </u>	Date/Time R	Date/Time R	rn to customer, per lab procedure, used in process
Tel Personal	Relinquising No.	Relinquished By V	Reinquished By	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION

39 of 137

16, 2014

, in the second		T T U	これ ロコン・コン・コ	CHAIN OF COSTOD INSAME LE ANALTS IS NECCEST		
						Page 1 of 1
Collector K.C. Patterson		Contact	Contact/Requester Karen	Karen Waters-Husted	Telephone No. 509-37	509-376-4650
114-035		Sampling Origin		Hanford Site	Purchase Order/Charge Code	le 300071ES20
Project Title 100KR4, AUGUST 2014		Logbook No.		HNF-N-506 64/93	Ice Chest No. 14/A &	FA 6-13-14 6WS-147
Shipped To (Lab) TestAmerica Incorporated, Richland	l, Richland		Method of Shipment GOV	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
CERCLA		Priority:	30 Days	PRIORITY	Offsite Property No.	N/A.
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	tot regulated for	r transportation per 49	CFR / IAI.A Dangerous	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	Hold Time Total , submitted under A, G, I, S, and W14 SAF: gerald, CEPRC.	Total Activity Exemption: Yes 🗹 No 🗌 4 SAFs into one SDG, not to exceed SDG closure
Sample No. Filter * Date Ti	Time	No/Type Container		Sample Analysis	Holding Time	Preservative
30 MM 6 1 3 MM Z	07500	1x1-LP ,	906.0_TRITIUM_LSC: COMMON	SC: COMMON MYLSG	G Months	None
, a,)	2x1-L G/P [‡]	C14_LSC: COMMON		6 Months	None
Z	no and more return passenger	3x1-L G/P ·	GAMMA_GS: COMMON; GAMMA_GS: GW 01	IMON;	6 Months	HNO3 to pH <2
\$ Z		3x1-L G/P	SRTOT_SEP_PRE	SRTOT_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
3 2	>	1x500-mL P	TC99_ETVDSK_LSC: COMMON	SC. COMMON	6 Months	HCI to pH <2

J4#136433

AUG 13 2014 1/30 CHPPE X. D. Date/Time Beceived By Date/Time Beceived By Date/Time Beceived By Date/Time Beceived By Date/Time Beceived By Date/Time Beceived By Date/Time Beceived By Date/Time Beceived By Disposed By Dispo	Relinquished By Ppatf Sign	Date/Time	Received By Sign	Date/Time	Matrix *	
AUG 13 2014 See Freed By AUG 13 2014 See Sediment DL AUG 13 2014 See Sediment DL Date/Time	K.C. Pattersen	AUG 13 2014 (1/20		AUG 13 2014 1720		S = Drum Solids
PLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) Received By Disposed By Disposed By Disposed By Disposed By Date/Time W = Water L C Oil V C C C C C C C C C C C C C C C C C C			Ved By Wed By	AUG 13 2014 ISS	= Sediment = Solid = Sludge	of = Drum Liquids = Tissue /I = Wipe
PLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) Received By Date/Time ON Disposed By Disposed By	d By	Date/Time	Received By V	Date/Time	W = Water I O = Oil V A = Air V	= Liquid = Vegetation = Other
Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By	Relinquished By	Date/Time	Received By	Date/Time		
	TNAL SAMPLE Disposal Method (e.g., Return to c DISPOSITION	customer, per lab procedure, used in proce			Date/Tir	9

(%)	
<u>`</u>	\sim
30	Ť
<u> </u>	S
主	Q
1	. 3

CH2MHill Plat	CH2MHill Plateau Remediation		CHAIN		Vacorsi	OF CUSTODY/SAMPLE ANALYSIS REOUEST	SISATA	ROUEST.	C.O.C.# I14-035-077	077
Company							} } 		Page 1 of 1	· ·
Collector K.C. Patterson	tterson		Contact	Contact/Requester	Karen Waters-Husted	-Husted	Telephone No.	one No. 509-376-4650	5-4650	
SAF No.	CHPHC II4-035		Sampling Origin	Origin	Hanford Site		Purcha	Purchase Order/Charge Code	le 300071ES20	
Project Title	100KR4, AUGUST 2014	2014	Logbook No.		HNF-N-506 64 / 93	93	Ice Chest No.	st No. N/A		
Shipped To (Lab)	TestAmerica Incorporated, Richland	rated, Richlan		Method of Shipment	GOVERNM	GOVERNMENT VEHICLE	Bill of 1	Bill of Lading/Air Bill No.	N/A	
Protocol	CERCLA		Priority:	30 Days	PRIORITY	ALR	Offsite	Offsite Property No.	N/A	
POSSIBLE SAMPL	POSSIBLE SAMPLE HAZARDS/REMARKS				SPECIA	SPECIAL INSTRUCTIONS	Hold Time	Total A	Total Activity Exemption: Yes 🗹 No	
** ** Contains Radioac Goods Regulations but a	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR Goods Regulations but are not releasable per DOE Order 458.1	nat are not regulated 1 r 458.1	or transportation per 49	CFR / IATA Dangerous		All Labs except WSCF: Batch all samples submitted under a of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	oles submitted under Fitzgerald, CHPRC	A, G, I, S, and W14 SAFs	All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	sure
Sample No.	Filter * Date	Time	No/Type Container	·	Sample	Sample Analysis		Holding Time	Preservative	
B2X658	N WAUG 13 2014 OOLO	07007	1x500-mL aG 7 7196_CR6: COMMON	7196_CR6:	COMMON	MALSH		24 Hours	Cool <=6C	

	Matrix * S = Soil DS	SE = Sedment DL = Drum Laquids SO = Solid T = Tissue SL = Sludge WI = Wipe	= Water L = Oil V = Air X		Date/Time
aglicance	AUG 13 2014 1120	Date/Time AUG 1 3 2014 F250	Date/Time	Date/Time	
	Received By LD. Wall Control C	Received By L. J. Frese THEM.	Received By	Received By	s) Disposed By
	Date/Time RAUG 13 2014 //22)	AUG 1.3 2014 (50%)	Date/Time R	Date/Time R	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION
(Print Sign	4.10,10a00			Disposal Method (e.g., Return to
	Relinquished By K.C. Patterson CHPBC	Relinquished By LD. Wall Character Comme	Relinquished By	Refinquished By	FINAL SAMPLE DISPOSITION

17.79 O GTTVI

JH 136433

CH2MHill Pla	CH2MHill Plateau Remediation Company		CHAIN		OF CUSTODY/SAMPLE ANALYSIS REQUEST	ALYSIS REQUEST	C.O.C.# I14-035-078
1							Page 1 of 1
Collector J.F	J.R. Aguilar CHPBC		Contact/F	Contact/Requester Kar	Karen Waters-Husted	Telephone No. 509-376-4650	5-4650
SAF No.	I14-035		Sampling Origin		Hanford Site	Purchase Order/Charge Code	e 300071ES20
Project Title	100KR4, AUGUST 2014	2014	Logbook No.	,	HNF-N-506 64 / 53	Ice Chest No. N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland	orated, Richla		Method of Shipment GC	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	-	Priority:	30 Days	PRIORITY	Offsite Property No.	N/A
POSSIBLE SAMP	POSSIBLE SAMPLE HAZARDS/REMARKS	8		:	SPECIAL INSTRUCTIONS	Hold Time Total A	Total Activity Exemption: Yes 🗸 No
** ** Contains Radioa Goods Regulations but	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	that are not regulated er 458.1	for transportation per 49 (ÇFR / LATA Dangerous		All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days.	into one SDG, not to exceed SDG closure
					Subim deliveranes & involves to svoit fargerard, can involves	razgoratu, oru too.	
Sample No.	Filter * Date	Time	No/Type Container		Sample Analysis	Holding Time	Preservative
B2X663	W W	6080	2x1-L G/P *	C14_LSC. COMMON	MON MYL8J	6 Months	None

Page 92 of 137

7H130433

CH2MHill Plateau Remediation	ateau	Remediation		CHAIN		OF CUSTODY/SAMPLE ANALYSIS REQUEST	ALYSIS REQUEST	I14-035-079
							•	Page 1 of 1
Collector J.	J.R. Aguilar CHPRC	uilar 3C		Contact/l	Contact/Requester Kare	Karen Waters-Husted	Telephone No. 509-376-4650	650
SAF No.	I14-	114-035		Sampling Origin		Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100]	100KR4, AUGUST 2014	2014	Logbook No.		HNF-N-506 (ote / 53	Ice Chest No. N/A	
Shipped To (Lab)	Test	TestAmerica Incorporated, Richland	orated, Richla		Method of Shipment GO	GOVERNIMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CER	CERCLA		Priority:	30 Days	PRIORITY	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS	LE HAZ	ARDS/REMARK	s			SPECIAL INSTRUCTIONS	Hold Time Total Activi	Total Activity Exemption: Yes 🗹 No 🗌
** ** Contains Radioactive Material at concentrations that are Goods Regulations but are not releasable per DOE Order 458.1	ictive Mat t are not r	erial at concentrations sleasable per DOE Oro	that are not regulate ler 458.1	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	CFR / IATA Dangerous	All Labs except WSCF: Batch all samples submitted under of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	one SDG, not to exceed SDG closure
Sample No.	Filter	* Date	Time	No/Type Container		Sample Analysis	Holding Time	Preservative
B2X665	z	W 8-13-14 OB23	0823	1x500-mL aG	7196_CR6: COMMON #	NON, WHIST	24 Hours	Cool <=6C

nt DL T WI	X < F		Date/Time
AUG 1 3 2014 (SXD)	Date/Time	Date/Time	
Jahren There TALK	ived By	sived By	Disposed By
AUG 13 2014 FLOS	Date/Time Rede	Date/Time Reco	customer, per lab procedure, used in process)
Relinquished By Wall Co. W. Co.	Relinquished By	Refinquished By	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION
	Date/Time Becelvation Received Three TALK AUG 13 2014 (20 St. = Studge WI	Date/Time Received By J.Friest THUK AUG 13.2014 (200 St. = Soliment DL =	Beceived By Date/Time

Page 93 of 137

CH2MHill Plateau Remediation Company	ıteau R	emediation		CHAIN		OF CUSTODY/SAMPLE ANALYSIS REQUEST	LYSIS REQUEST	C.O.C.# I14-035-081
) •								Page 1 of 1
Collector CHPRC	CHPRC CHPRC			Contact	Contact/Requester Kar	Karen Waters-Husted	Telephone No. 509-376-4650	0.
SAF No.	114-035	35		Sampling Origin		Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100KJ	100KR4, AUGUST 2014	2014	Logbook No.		HNF-N-506 (04 / 94	Ice Chest No. N/A	
Shipped To (Lab)	TestA	TestAmerica Incorporated, Richland	rated, Richlan		Method of Shipment GO	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A	Α,
Protocol	CERCLA	ХA		Priority:	30 Days	PRIORITY	Offsite Property No. N/A	'A
POSSIBLE SAMPLE HAZARDS/REMARKS	E HAZA	RDS/REMARKS	!			SPECIAL INSTRUCTIONS	Hold Time Total Activity	Total Activity Exemption: Yes 🗹 No
** ** Contains Radioactive Material at concentrations that are Goods Regulations but are not releasable per DOE Order 458.	ctive Maten are not rele	ial at concentrations the asable per DOE Order	nat are not regulated fr 458.1	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	CFR / IATA Dangerous		All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fifzoerald CHPRC.	e SDG, not to exceed SDG closure
							famous fa	
Sample No.	Filter *	Date	Time	No/Type Container		Sample Analysis	Holding Time	Preservative
B2X670	z	WASS 13 204 2/2	22	1x500-mL aG	7196_CR6: COMMON	de mon	L&P 24 Hours	Cool <=6C

J4H 136493 NOC843

Model &	Soil DS	SE = Sedment DL = Drum Liquids SO = Solid T = Tissue SL = Shidge WI = Wipe	X X = =		Date/Time
Dote/Time	AUG 13 28th 1400	Date/Time AUG 13.7014 1500	Date/Time	Date/Time	
Coint Same	$\sim 60 (0000)$	J. Frenz 18th AUG 137011			Disposed By
Donaired Br	CD. Well	Received By	Received By	Received By	(ss:
Doto/Time 2.1	AUG 13 2014	Date/Time AU 6 1 3 2011. I 206	Date/Time	Date/Time	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION
Cis.	Sign	J. D. Wall			Disposal Method (e.g., Return to cu:
W.C. Dottercon	CHPRG	Relinquished By an Chirac	Relinquished By	Relinquished By	FINAL SAMPLE DISPOSITION

Page 94 of 137

CH2MHill P Company	lateau	CH2MHill Plateau Remediation Company		5	CHAIN OF C	OF CUSTODY/SAMPLE ANALYSIS REQUEST	NALYSI	S REQUEST	C.O.C.# I14-035-084	
									Page 1 of 1	
Collector	J.R. Aguilar CHPRC	guilar RC		Ö	Contact/Requester	Karen Waters-Husted	Te	Telephone No. 509-376-4650	0	
SAF No.	114	114-035		Sai	Sampling Origin	Hanford Site	Pu	Purchase Order/Charge Code	300071ES20	
Project Title	100	100KR4, AUGUST 2014	ſ 2014	, L	Logbook No. HN	HNF-N-506 66 / 53	Ice	Ice Chest No. N/A		
Shipped To (Lab)		TestAmerica Incorporated, Richland	porated, Richl	7277002011	Method of Shipment	GOVERNMENT VEHICLE	Bil	Bill of Lading/Air Bill No. N/A	A	
Protocol	Œ	CERCLA		ı.	Priority: 30 Days	s PRIORITY	J0	Offsite Property No. N/A	A	
POSSIBLE SAM	PLE HA	POSSIBLE SAMPLE HAZARDS/REMARKS	SS			SPECIAL INSTRUCTIONS	Hold Time		Total Activity Exemption: Yes 🗸 No	
** ** Contains Radi Goods Regulations	oactive Ma	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR Goods Regulations but are not releasable per DOE Order 458.1	s that are not regulat rder 458.1	ed for transportation	a per 49 CFR / IATA Dangcrous		samples submitted 1 Scott Fitzgerald, CF	All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	SDG, not to exceed SDG closure	
Sample No.	Filter	* Date	Ţime	No/Type Container	tainer	Sample Analysis		Holding Time	Preservative	.,
B2X680	z	W 8-13-14	11.13	1x1-L P		906.0_TRITIUM_LSC: COMMON M	m4L89	6 Months	None	
B2X680	z	X		2x1-L G/P 1	JP 1 C14_LSC: COMMON	COMMON		6 Months	None	Э Е
B2X680	z	→	>	3x1-L G/P *		SRTOT_SEP_PRECIP_GPC: COMMON		6 Months	HNO3 to pH <2	pι
-B 2X680	z	W 8-13-14	= 3	1x500-mL P %		TC99_ETVDSK_LSC: COMMON		6 Months	HCI to pH <2	em
ge							-			IL

	ş	**			
	Š	DL = Drum Liquids T = Tissue WI = Wipe			ľime
N.Collins	= Soil	S = Sediment S = Solid	1 B U		Date/Time
-		N S N	> 0 ∢		
orto/Timo	1130	Date/Time	Date/Time	Date/Time	
	Au 13 mg 1230	AUG 1 3 2014 1 Sec	Q	Ω	
Sim	3	J			Disposed By
tip.	X 0 X	BOLTHUR			
Domined Dr.	325	Received By 5.6×1 /s	Received By	Received By	(ss
Deta/Pline	30	AUG 1 3 2014 SSS	Date/Time	Date/Time	FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process) DISPOSITION
		S.O. Wall			Method (e.g., Return to cust
[.]		类	>		Disposal
Battle J.B.	J.R. Aguilar	Refinquished By CLD Wall	Relinquished By	Relinquished By	FINAL SAMPLE DISPOSITION

PRINTED 0 6/25/2014

CH2MHill Pl Company	CH2MHill Plateau Remediation Company		CHAIN		OF CUSTODY/SAMPLE ANALYSIS REQUEST	LYSIS REQUEST	co.c.# I14-035-085
÷							Page 1 of 1
Collector	J.R. Aguilar CHPRC		Contact/	Contact/Requester Kare	Karen Waters-Husted	Telephone No. 509-376-4650	
SAF No.	114-035		Sampling O	rigin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100KR4, AUGUST 2014	2014	Logbook No.		HNF-N-506 66 / 53	Ice Chest No. N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland	orated, Richlan	d Method of	Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A	+
Protocol	CERCLA	-	Priority:	30 Days	PRIORITY	Offsite Property No. N/A	Ŧ
POSSIBLE SAME	POSSIBLE SAMPLE HAZARDS/REMARKS				SPECIAL INSTRUCTIONS	Hold Time Total Activity	Total Activity Exemption: Yes 🗹 No 🗌
** ** Contains Radio Goods Regulations by	** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1	hat are not regulated in 458.1	for transportation per 49 (CFR / IATA Dangerous	All Labs except WSCF: Batch all samples submitted under of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CHPRC.	All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W14 SAFs into one SDG, not to exceed SDG closure of 14 days. Submit deliverables & invoices to Scott Fitzgerald, CFPRC.	SDG, not to exceed SDG closure
Sample No.	Filter * Date	Time	No/Type Container		Sample Analysis	Holding Time	Preservative
B2X682	N W 8-13-14	1113	1x500-mL aG	7196_CR6: COMMON 1	NON: WHL8V	24 Hours	Cool <=6C

	Matrix *	= Soil DS	SE = Sedment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WI = Wipe	1 > X		Date/Time	A-6004-842 (REV 2)
	Date/Time	AUG 13 2014 1230	J.FILE THU AUG 13 MU (TO	Date/Time	Date/Time	·	
	C	- (J. (Dall) - (J. K.)	h J. Files THU			Disposed By	
	Received By		Received By	Received By	Received By	(sse	
	Date/Time	-AUG 13204 U.30	AUG 1 3 2014 1500	Date/Time	Date/Time	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	
/	Print	1	- LOTOR			Disposal Method (e.g., Return to c	14
	Relinguished By 11112	CHPRC	Relinquished By. Wall	Relinquished By	Relinquished By	FINAL SAMPLE DISPOSITION	PRINTED 0 6/25/2014

Page 96 of 137

PRINTED 0 6/25/2014

Te	st¥	/m	1er	ic	D:
THELE	FADER IN	ENVIR	YEMPET.	AI TE	STING

Sestemple ethtely-2011st

	me Received: 8/3/14 L 500 Samp	Container GM Screen Result: (Airlock) 40 cpm Initials[7] le GM Screen Result (Sample Receiving) 40 cpm Initials[7]
Client:_	PGW SDG#: WO69	843 SAF #: 174-035 NA[]
Lot Nur	mber: <u>J4H130433</u>	
Chain o	f Custody # <u>I14-035-055;</u> 062;068	;069;671;076;677;078;079;081;084;085
Shippin	g Container ID or Air Bill Number : /tand De	livered NA Q-ND
Samples	s received inside shipping container/cooler/box	Yes [J] Continue with 1 through 4. <u>Initial</u> appropriate response. No [] Go to 5, add comment to #16.
1.	Custody Seals on shipping container intact?	Yes [] No [] No Custody Seal 🎵]
2.	Custody Seals dated and signed?	Yes [] No [] No Custody Seal []
3.	Cooler temperature:	5.5 °C NA [] NA [] Wet [] Dry []
4.	Vermiculite/packing materials is	NA[J] Wet[] Dry[]
Item 5 t 5.	through 16 for samples. <u>Initial</u> appropriate response. Chain of Custody record present?	Yes [] No []
6.	Number of samples received (Each sample may con	ntain multiple bottles): \[\]
7.	Containers received: 7x500mlay; 77x	p; 3x500mlp
8.	Sample holding times exceeded?	NA[] Yes[] No[f]
9.	Samples have:tapehazare	d labels
10.	Matrix:A (FLT, Wipe, Solid, Soil)	(Water)S (Air, Niosh 7400)T (Biological, Ni-63)
11.	Samples:	ngare broken no head space)Other
(12).	Sample pH appropriate for analysis requested	Yes No [] NA [] sample ID, initial pH, amount of HNO3 added and pH after addition on table)
13.	Were any anomalies identified in sample receipt?	
14.	Description of anomalies (include sample numbers)	:NA[5] & W
15.	Sample Location, Sample Collector Listed on COC *For documentation only. No corrective action needs	
16.	Additional Information: NIR Sw	
[] C1	lient/Courier denied temperature check.	[] Client/Courier unpack cooler.
	Sample Check-in List completed by Sample Custon	lion
	Signature:	Date: 8/13/14
	Client Notification needed? Yes [] Date:	
(contacted:
8	No action necessary; process as is	4/11/11/11
	Project Manager Consultation	Date O (- V / Y

*** RE-ANALYSIS REQUEST ***

DUE DATE 9/12/14

CUSTOMER	CH	2 MHele
ANALYSIS	Δ	1 plu
MATRIX	W	WTGN
LOT NUMBER		
SAMPLE DELIVER	Y GROUP	
OLD BATCH NUME	BER	4227046
NEW BATCH NUM	BER	4245067
LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1)		
2) ALL		
3)		Dipsort
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		-
17)		
18)		
19)		
20)		
LAB QC ID	1	Assigned with new batch.
<		

9/6/2014 8:14:01 AM	Sample Preparation/Analysis	ysis		Balance	Jd:112040	Balance Id:1120403183,B145441330
384868, CH2M Hill Plateau Remediation Company	AZ Gross Alpha Prp GPC001			Pip	Pipet #:	
, Pacific Northwest National Lab	S7 Gross Alpha by GPC using Am-241 curve	Ð				
AnalyDueDate: 09/12/2014	5I CLIENT: HANFORD			Sep1 DT/Tm Tech:	ech:	
Batch: 4245067 WATER pCi/L	PM, Quote: SS , 57671	_		Sep2 DT/Tm Tech:	ech:	
SEQ Batch, Test. Notice				Prep T	ech: People	Prep Tech: PeoplesK,RichardsonB
Work Ord, Lot, Total Total Initial Aliquot Sample Date Amt/Unit Acidified/Unit Amt/Unit	Adj Aliq Amt QC Tracer (Un-Acidified) Prep Date	Ppt or Geometry	Count Time Min	Detector Count On Off (24hr) Circle		CR Analyst, Comments:
1 M4LQJ-3-AC 52.10g,in	in 52.10g	22.80mg	240	C102 822		A11216
J4H120409-4-SAMP			Ser	Alpha- 6.02E-04 inCi/Sa	CC	Beta: 2.32E-04 uCi/Sa
	i,in 50.00g	24.20mg	240	772		
J4H120409-4-DUP			Scr.	Alpha: 6.02E-04 uGi/Sa	Sa	Beta: 2.32E-04 uCi/Sa
	in 52.80g	28.80mg	240	552		
Day J4H120409-5-SAMP			Scr.	Alpha: 1.86E-04 uC/Sa	, and a	Beta: 2.32E-04 uCi/Sa
4 M4T76-1-AA-B 201.30g,in	g,in 201.30g	0.20mg	240	W22		
1			Scr.	Alpha:	The state of the s	Beta:
5 M4T76-1-AC-C 201.40g,in	201.40g	0.60mg	240	922		
	05/09/14,pd					
09/04/2014 12:50 pd Amt			Scr.	Alpha:		Beta:
			į		19.32 19.32	
TestAmerica Key: In - Initial Amt, fi - Final Amt, c Richland Wa. pd - Prep Dt, dc - Date Chg, r - R	In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	ISV - Insuffi	cient Volum	ISV - Insufficient Volume for Analysis		WO Cnt: 5 Prep_SamplePrep v4.8.69

9/6/2014 8:14:02 AM			Sampl	le Prepa	aration	e Preparation/Analysis	S			Balance Id:	Balance Id:1120403183,B145441330	145441330
		∢ ω	AZ Gross Alpha Prp GPC001 S7 Gross Alpha by GPC using Am-241 curve	rp GPC00 v GPC usi	1 ng Am-24	1 curve				Pipet #:		
AnalyDueDate: 09/12/2014	2014		51 CLIENT: HANFORD	ORD)				Sep1	Sep1 DT/Tm Tech:		
Batch: 4245067	pCi/L	\r							Sep2	Sep2 DT/Tm Tech:		
										Prep Tech:	Prep Tech: WattN,RichardsonB	guosp
Work Ord, Lot, Total Sample Date Amt/Unit	Total Acidified/Unit	Initial Aliquot 7 Amt/Unit (Adj Aliq Amt QC QC (Un-Acidified)	L- ~	Tracer Yield		Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	off CR Analyst, Init/Date	Comments:
Comments: M4T76-BLK CommentsP-14-00272,S-14-00059P-14-00564,P-14-00645	CommentsP-14-00272,S	-14-00059P-1	4-00564,P-14-0064{	10								
All Clients for Batch: 384868, CH2M Hill	Plateau Remediation Company	п Сомрапу	Pacific Northwest		National 1	Lab, SS	, 57671					5 e
M4LQJ3AC-SAMP ALPHA	Constituent List: RDL:3 pCi/L	I.CL:	UCL: RI	RPD:			i					pten
	pCi/L	ICI:	UCL: RI	RPD:								IDE
O M4T761AC-LCS: Q Am-241 RDL:	pCi/L	ICI:10	UCL:130 RI	RPD:20								er 1
	o: .: 2 Decay to SaDt:	SaDt: Y	Blk Subt.: N	Sci.Not.:	Ot.: Y	ODRs:	щ					υ, 2
M41/01AA-BLA: Uncert Level (#s)	.: 2 Decay to	SaDt: Y	Blk Subt.: N	Sci.Not.	ot.: Y	ODRs:	Д					UTZ
M41701AC-LCS: Uncert Level (#s).:	2 Decay to	SaDt: Y	Blk Subt.: N	Sci.Not.:	Ot.: Y	ODRs:	щ					+
TestAmerica Key: In -	Key: In - Initial Amt, fi - Final A	.mt, di - Dilute	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2	2 - Sep2	Page 2		ISV - Inst	ISV - Insufficient Volume for Analysis	ıme for Anal	ysis		WO Cnt: 5
Richland Wa. pd -	pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment	, r - Referenc	∋ Dt, ec-Enrichment	Cell, ct-Cocktailed Added	ktailed Add	eq					Prep	Prep_SamplePrep v4.8.69

9/8/2014 11:09:45 AM

ICOC Fraction Transfer/Status Report ByDate: 9/8/2013, 9/13/2014, Batch: '4245067', User: *ALL Order By DateTimeAccepting

Q Batch Wor	rk Ord CurStat	us Ac	cepting		SOPs,Reagents,Comments
4245067					
AC .	Rev1C	RichardsonB	9/4/2014 12:47	7:35 PM	
SC		McginnisT	IsBatched	9/2/2014 2:26:38 PM	ICOC_RADCALC v4.9.0
SC		RichardsonB	InPrep	9/4/2014 12:47:35 PM	RL-PRP-004 REVISION 2
SC		WattN	Prep2C	9/6/2014 8:23:18 AM	RL-GPC-001 REVISION 4
SC		BullJ	InCnt1	9/6/2014 9:53:02 AM	RL-CI-006 REVISION 5
SC		BullJ	CalcC	9/7/2014 4:39:40 PM	RL-CI-006 REVISION 5
SC		McginnisT	Rev1C	9/8/2014 11:09:39 AM	RL-DR-001 Rev 5
AC .		WattN	9/6/2014 8:23:	18 AM	
IC .		BullJ	9/6/2014 9:53:0	02 AM	
4 <i>C</i>		BullJ	9/7/2014 4:39:4	40 PM	
4C		McginnisT	9/8/2014 11:09	9:39	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Sample Preparation/Analysis	Balance Id:1120482733,B145441330	Pipet#:	- 1	Sep1 DT/Tm Tech:	Sep2 DT/Tm Tech:	Prep Tech: PeoplesK	 Count On Off CR Analyst, Comments: (24hr) Circle Init/Date	Ch114215 h560	Apha: 6.02E-04 uCi/Sa Beta: 2.32E-04 uCi/Sa		Beta: 2.32E-04 uCi/Sa	pte	emb	Alpha: 1.86E-04 uCi/Sa Beta: 2.32E-04 uCi/Sa	16	, 200	Alpha: Beta: 1 (1326 Stasin 1/8	>	Alpha: Beta:	
Sample Preparation/Analysis				Sep1 D	Sep2 D		Count Detector Time Min Id	200		200	Scr.	200			200						ISV - Insufficient Volume for Analysis
	Sample Preparation/Analysis	ross Beta Prp GPC001	ross Beta by GPC using Sr/Y-90 curve	LIENT: HANFORD	PM, Quote: SS, 57671		QC Tracer Dish Prep Date Yield Size		";ZXI.P #Containers: 4		#Containers: 4			2XLP #Containers: 4			###		07/30/14,pd	#Containers: 1	- Sen? Page 1
8/26/2014 7:27:23 384868, CH2M Hii , Pacific Northwess AnalyDueDate: C Batch: 4227047 SEQ Batch, Test: No Vork Ord, Lot, Sample Date 1 M4LQJ-1-AD J4H120409-5-SAMP 1 M4LQJ-1-AD J4H120409-5-DUP 1 M4LQJ-1-AB J4H120409-5-DUP 1 M4LQJ-1-AB J4H120409-5-DUP 1 M4LQJ-1-AB J4H120409-5-DUP 1 M4MR4-1-AC J4H150000-47-BLK 5 M4MR4-1-AC-C J4H150000-47-LCS 1 M4H50000-47-LCS 1 M4H50000-47-LCS 1 M4H50000-47-LCS 1 M4H50000-47-LCS 2 M4MR4-1-AC-C J4H150000-47-LCS 3 M4H150000-47-LCS 1 M4H150000-47-LCS 3 M4H150000-47-LCS 1 M4H150000-47-LCS 3 M4H150000-47-LCS 1 M4H150000-47-LCS 3 M4H150000-47-LCS 3 M4H150000-47-LCS 4 M4MR4-1-AC-C J4H150000-47-LCS 3 M4H150000-47-LCS 4 M4MR4-1-AC-C J4H150000-47-LCS 3 M4H150000-47-LCS	8/26/2014 7:27:29 AM	lediation Company		AnalyDueDate: 09/12/2014 51 CL	WATER	ione	Total Initial Aliquot Acidifled/Unit Amt/Unit			87.30g,in 87.30			ļ					201.90g,in 201.9	ļ		1

8/26/2014 7:27:29 AM		Sample	e Preparation/Analysis	on/Analy	sis		Balance Id:	Balance Id:1120482733,B145441330	45441330
		BC Gross Beta Prp GPC001	GPC001				Pipet #:		
AnalyDueDate: 09/12/2014		S8 Gross Beta by GPC using Sr/Y-90 curve 5I CLIENT: HANFORD	GPC using Sr/Y JRD	-90 curve		Sep	Sep1 DT/Tm Tech:		
Batch: 4227047	pCi/L		:			Sep	Sep2 DT/Tm Tech:		
SEQ Batch, Test: Note							Prep Tech: PeoplesK	PeoplesK	
Work Ord, Lot, Total Sample Date Amt/Unit	Total Initial Aliquot Acidified/Unit Amt/Unit	Adj Aliq Amt QC T (Un-Acidified) Prep	QC Tracer Tracer Prep Date Yield	Dish Size	Ppt or Geometry	Count Detector	tor Count On Off (24hr) Circle	off CR Analyst, Init/Date	Comments:
Comments: M4MR4-BLK "Comments P-14-00580",S-14-00059	nments P-14-00580",S-14-0006	95							
All Clients for Batch: 384868, CH2M Hill Plat	Plateau Remediation Company	Pacific Northwest	thwest National	al Lab, SS	57671				Se
M4LQJlAD-SAMP Constituent BETA RDL:4	List: pci/L LCL:	UCL: RP	RPD:						otem
o BETA RDI:4	pci/L LCL:	UCL: RP	RPD:						nbe
Sr-90 RDL:	pci/L LCL:70	UCL:130 RP	RPD:20						r 1
M4LQJIAD-SAMP Calc Info: Uncert Level (#s):: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	r odrs:	ф				6, 2
M4MK41AA-BLK: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	r odrs:	ď				014
M4MK4IAC-165: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	r odrs:	щ				4
Toot Amorian Initial Amt	4	f Einst Amt di Diluted Amt et . Sent e2	Cano Dado		#W. Joseph	ISV - Insufficient Volume for Analysis	naliveis	J/M	WO Cut: 5
već v	· A	uted Airit, ST - Sep.1, SZ 1ce Dt, ec-Enrichment (Sell, ct-Cocktailed	Added	100		cicycle	Prep_Sa	Prep_SamplePrep v4.8.69
							*		

9/3/2014 5:30:39 PM

ICOC Fraction Transfer/Status Report ByDate: 9/3/2013, 9/8/2014, Batch: '4227047', User: *ALL Order By DateTimeAccepting

k Ord CurState	us A	ccepting		SOPs,Reagents,Comments
		· · · · · · · · · · · · · · · · · · ·		
Rev1C	PeoplesK	8/18/2014 4:21	:34 PM	
	PeoplesK	Prep1C	8/18/2014 4:21:34 PM	RL-PRP-004 REVISION 3
	wattn	IsBatched	8/25/2014 10:53:53 AM	ICOC_RADCALC v4.9.0
	WattN	Prep2C	8/26/2014 7:35:37 AM	RL-GPC-001 REVISION 4
	BullJ	InCnt1	8/26/2014 7:49:53 AM	RL-CI-006 REVISION 5
	BullJ	CalcC	8/28/2014 2:12:11 PM	RL-CI-006 REVISION 5
	McginnisT	Rev1C	9/3/2014 5:30:11 PM	RL-DR-001 Rev 5
	WattN	8/26/2014 7:35	:37	
	BullJ	8/26/2014 7:49	:53	
	BullJ	8/28/2014 2:12	:11 PM	
	McginnisT	9/3/2014 5:30:1	11 PM	
		Rev1C PeoplesK PeoplesK wattn WattN BullJ BullJ McginnisT WattN BullJ BullJ	Rev1C PeoplesK 8/18/2014 4:21 PeoplesK Prep1C wattn IsBatched WattN Prep2C BullJ InCnt1 BullJ CalcC McginnisT Rev1C WattN 8/26/2014 7:35 BullJ 8/26/2014 7:49 BullJ 8/28/2014 2:12	Rev1C PeoplesK 8/18/2014 4:21:34 PM PeoplesK Prep1C 8/18/2014 4:21:34 PM wattn IsBatched 8/25/2014 10:53:53 AM WattN Prep2C 8/26/2014 7:35:37 AM BullJ InCnt1 8/26/2014 7:49:53 AM BullJ CalcC 8/28/2014 2:12:11 PM MoginnisT Rev1C 9/3/2014 5:30:11 PM WattN 8/26/2014 7:35:37 BullJ 8/26/2014 7:49:53 BullJ 8/28/2014 2:12:11 PM

AC: Accepting Entry; SC: Status Change

TestAmerica Richland Richland Wa.

9/3/2014 12:53:10 PM Sample Prep	Sample Preparation/Analysis	sis		Balance	Balance Id:1120482733,B425712682	125712682
384868, CH2M Hill Plateau Remediation Company CG Sr-Total Prp/Sep GPC003 Pacific Northwest National Lab TH Total Strontium by GPC	33			Pipet #:	:#	
				Sep1 DT/Tm Tech: 09/03/2014 08:16,BolesT	h: 09/03/2014 08	:16,BolesT
Batch: 4227048 WATER pCi/L PM, Q SEQ Batch, Test: None All Tests: 4225075 88EA, 4227041 5SS3, 4227042 FPS5, 4227044	PM, Quote: SS , 57671 4227044 ARS6, 4227045 AWTA, 4227048 CGTH,	I VTA, 4227048 CGT	— — — —	Sep2 DT/Tm Tech:	:: :::	
					₹ I	
Work Ord, Lot, Total Total Initial Aliquot Adj Aliq Amt CT Tracer Sample Date Amt/Unit Acidified/Unit Amt/Unit Un-Acidified)	Tracer Dish Yield Size	Ppt or C Geometry Tim		Detector Count On Off (24hr) Circle	Off CR Analyst,	Comments:
1 M4L8C-1-AE 1000.40g,in 1000.40g SRTC2851		11.80mg		214	, , , , ,	<
)		h h 2 2	9/8/1486
	09/03/2014 08:16,s1	16,s1	Scr	Alpha: -2.91E-04 uCi/Sa	Beta: 7.	Beta: 7.09E-04 uCi/Sa
2 M4L8G-1-AE SRTC2852		11.70mg		Je	No senió mode so	/
			<i>y</i> •	3/0/1/00	Paleston St. Space of the St. Space of t	•
			Scr.	Alpha: 7.29E-04 uCi/Sa	Beta: -3.	Beta; -3.04E-08 uCi/Sa
3 M4L8Q-1-AD 1006.50g,in 1006.50g SRTC2853		12.40mg			white tennings of	pto
			(1)	324	Productor Esperance	em
0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Scr	Alpha: 2.03E-04 uCi/\$a	Beta: -6.	Beta: -6.93E-05 uCi/Sa
4 M4L8Q-1-AF-X SRTC2854		12.30mg				16
a			•	326		, 2
			Scr.	Alpha: 2.03E-04 uCi/Sa	Beta: -6.	Beta: -6.93E-05 uCi/Sa 4.
5 M4MR5-1-AA-B 1005.30g,in 1005.30g SRTC2855		11.10mg				No. of the last of
				2		Olimino'd kiloso pal
08/28/2014 10:21 pd #Containers: 1			Scr.	Alpha:		Beta:
6 M4MR5-1-AC-C 1000.70g.in 1000.70g STSF0541		11.40mg		g are		
J4H150000-48-LCS				*		
			Scr.	Alpha:		/ Eeta:
TestAmerica Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2	Page 1	ISV - Insufficient Volume for Analysis	ent Volume	for Analysis	 	WO Cnt: 6
Richland Wa. pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	cktailed Added				Prep_	Prep_SamplePrep v4.8.69

			-)			Balance Id:1	Balance Id:1120482733,B425712682	79071/07
		CG Sr-Total Prp/Sep GPC003	p/Sep GPC	2003					Pipet #:		
AnalyDueDate: 09/12/2014		51 CLIENT: HANFORD	ANFORD	ې				Sep1	Sep1 DT/Tm Tech:		
Batch: 4227048	pCi/L				ŀ	ļ.		Sep2 I	Sep2 DT/Tm Tech:		
									Prep Tech:	Prep Tech: BolesT,RichardsonB	dsonB
Work Ord, Lot, Total Ac	Total Initial Aliquot Acidified/Unit Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
4MR5-BLK or Batch:	CommentsS-14-00154,P-14-00575,P14-00575,P14-00575,P14-00575,P1ateau Remediation Company	P-14-00335,P-14-	00646 Northwest		Lab, SS	. 57671				- -	Se
M4L8ClAE-SAMP Constituent List: Sr-90 RDL:2.00E+00 p	st: pci/L LCL:70	UCL:130	RPD:20								epte
M4MK51AA-BLK:	Ci/L	UCL:	RPD:								mbe
M4MR51AC-LCS: Sr-90 RDL:2	pci/L LCL:70	UCL:130	RPD:20								er 1
M4L8C1AE-SAWP Calc Info: Uncert Level (#s):: 2	Decay to SaDt: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs:	щ					16, 2
M4MK51AA-bik: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.:	N SC.	Sci.Not.: Y	ODRs:	щ					:01
M4MK51AC-LCS: Uncert Level (#s).: 2	Decay to Sabt: Y	Blk Subt.:	×	Sci.Not.: Y	ODRs:	Д					4
				•		1					
		7									
TestAmerica Key: In - Initial Amt, Richland Wa. pd - Prep Dt, d	ln - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	ited Amt, s1 - Sep ice Dt, ec-Enrichm	1, s2 - Sep2 ent Cell. ct-C	Page 2 Jocktailed Add	þe	ISV - Ins	ISV - Insufficient Volume for Analysis	me for Analy	sis	W(Prep_S	WO Cnt: 6 Prep_SamplePrep v4.8.69

9/9/2014 2:14:27 PM

ICOC Fraction Transfer/Status Report ByDate: 9/9/2013, 9/14/2014, Batch: '4227048', User: *ALL Order By DateTimeAccepting

rd CurStat	us Ac	cepting		SOPs,Reagents,Comments
		7444		
Rev1C	RichardsonB	8/28/2014 10:1	7:06	
	RichardsonB	InPrep	8/28/2014 10:17:06 AM	RL-PRP-004 REVISION 2
	bolestr	IsBatched	9/3/2014 6:51:12 AM	ICOC_RADCALC v4.9.0
	BolesT	Sep1C	9/3/2014 1:02:39 PM	RL-GPC-010 REVISION 4
	BourneD	Sep1C	9/3/2014 1:03:23 PM	RL-GPC-010 REVISION 4
	BullJ	InCnt1	9/3/2014 1:06:41 PM	RL-CI-006 REVISION 5
	DawkinsO	CalcC	9/9/2014 2:18:49 AM	RL-CI-006 REVISION 5
	McginnisT	Rev1C	9/9/2014 2:14:20 PM	RL-DR-001 Rev 5
	BolesT	9/3/2014 1:02:3	39 PM	
	BourneD	9/3/2014 1:03:2	23 PM	
	BullJ	9/3/2014 1:06:4	41 PM	
	DawkinsO	9/9/2014 2:18:4	19 AM	
	McginnisT	9/9/2014 2:14:2	20 PM	
		Rev1C RichardsonB RichardsonB bolestr BolesT BourneD BullJ DawkinsO McginnisT BolesT BourneD BullJ DawkinsO	Rev1C RichardsonB 8/28/2014 10:1 RichardsonB InPrep bolestr IsBatched BolesT Sep1C BourneD Sep1C BullJ InCnt1 DawkinsO CalcC McginnisT Rev1C BolesT 9/3/2014 1:02:3 BullJ 9/3/2014 1:03:2 BullJ 9/3/2014 1:06:4 DawkinsO 9/9/2014 2:18:4	Rev1C RichardsonB 8/28/2014 10:17:06 RichardsonB InPrep 8/28/2014 10:17:06 AM bolestr IsBatched 9/3/2014 6:51:12 AM BolesT Sep1C 9/3/2014 1:02:39 PM BourneD Sep1C 9/3/2014 1:03:23 PM BullJ InCnt1 9/3/2014 1:06:41 PM DawkinsO CalcC 9/9/2014 2:18:49 AM McginnisT Rev1C 9/9/2014 2:14:20 PM BolesT 9/3/2014 1:03:23 PM BullJ 9/3/2014 1:06:41 PM DawkinsO 9/9/2014 2:18:49 AM

AC: Accepting Entry; SC: Status Change

TestAmerica Richland Richland Wa.

9/5/2014 1:24:18 PM	Sample Preparation/Analysis	Bal	Balance Id:1120482733,,
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab	AW Gamma Prp GAM001		Pipet #:
AnalyDueDate: 09/12/2014	51 CLIENT: HANFORD	Sep1 DT/Tm Tech:	m Tech:
Batch: 4227045 WATER pCi/L SEQ Batch, Test: None All Tests: 4225075 88EA, 4227041 5SS3, 4227042 FPS5,	PM, Quote: SS, 57671 4227044 ARS6, 4227045 AWTA,	Sep2 D	Г/Tm Tech: Prep Tech: ,NeyensA
Work Ord, Lot, Total Initial Aliquot Sample Date Amt/Unit Acidified/Unit Amt/Unit	Adj Aliq Amt QC Tracer Tracer Dish (Un-Acidified) Prep Date Yield Size	Count Detector Time Min Id	Count On Off CR Analyst, Comments: (24hr) Circle Init/Date
* M4L8C-1-AD 2504.20g,in	2504.20g	312 MM 415	2221
J4H130433-3-SAMP		VIll mill	44 C 9/8/1400
08/13/2014 10:45/		Scr: Alpha: -2.91E-04 uCi/Sa	. I. I. T. Be
Z/M4L8G-1-AD 2511.60g,in	2511.60g	G1149/8/1	41149/402 1221 9/8/40R
	XI P:1 X500MI P #Containers: 10	Scr. Albha: 7.29E-04 uCi/Sa	Beta: -3.04E-08 uCi/Sa
	155	court 7	em 020 1/8/16 2060
908/13/2014 08:40 Anthec: 9XLP;1X500MLP #Cont	XLP;1X500MLP #Containers: 10	Scr. / Alpha: 7.29E-04 uCi/Sa	t / Beta: -3.04E-08 uCi/Sa
2544.80g,in	2544.80g	1.	16,
J4H150000-45-BLK		97	
09/04/2014 12:44 pd #Containers: #Containers: #Containers: #Containers: #Containers:	#	Scr: Alpha:	Beta:
5 M4MR2-1-AC-C 2501.80g,in	2501.80g QCAG1982	20	1 5920
J4H150000-45-LCS	0/725/14,pd	715	
	#Containers: 1	Scr. Alpha:	Beta:
TestAmerica Key: In - Initial Amt, fi - Final Amt, di - Di Richland Wa. pd - Prep Dt, dc - Date Chg, r - Refere	In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	ISV - Insufficient Volume for Analysis	WO Cnt : 5 Prep_SamplePrep v4.8.69

				Comments:	September 16, 2014	e de Salamana de S
					RPD: RPD: RPD: RPD:	
				Off CR Analyst, e Init/Date	UCL: 130 UCL: UCL: UCL:	
Balance Id:,	r ipet #. Sep1 DT/Tm Tech:	Sep2 DT/Tm Tech:	Prep Tech:	Count On Off (24hr) Circle	LCL: 70 UCCL: TCCL: TCCCCCCCCCC	
	Sep1	Sep2		Defector	pci/L LC pci/L LC pci/L LC pci/L LC	
		:		Ppt or Count Geometry Time Min		
ysis		1		Ppt or Geometry	SS , 57671 RDL:1.50E+01 RDL:1.50E+01 RDL:5.00E+00 RDL:0.00E+00 S: B S: B	
Preparation/Analysis				r Dish Size	000R 000R 000R	
Preparat 01				Trace	west National Cs-1 Cs-1 Sci.Not.: Y Sci.Not.: Y Sci.Not.: Y	
Sample F a Pro GAM0	A Gamma by HPGE 51 CLIENT: HANFORD		=	QC Tra Prep D	RPD: RPD: RPD: RPD: RPD: RPD: N N N N N N N N N N N N N N N N N N N	
Sample Pr AW Gamma Pro GAM001	TA Gamma by HPGE 51 CLIENT: HANFOR			Adj Aliq Amt (Un-Acidifled)	THE STATE OF THE S	
		pCi/L		Initial Aliquot Amt/Unit	cemediation Company ci/L LCL: ci/L	
			-	Total Acidified/Unit	au Remediat ist: pCi/L	
57 PM	09/12/2014	2	None	Total Amt/Unit	for Batch: CH2M Hill Plateau Remediation Company P Constituent List: RDL:2.50E+01 pCi/L LCL: RDL:1.50E+01 pCi/L LCL: RDL:5.00E+01 pCi/L LCL: RDL:5.00E+01 pCi/L LCL: RDL:5.00E+01 pCi/L LCL: RDL:5.00E+01 pCi/L LCL: Level (#s).: 2 Decay to SaDt: Y :	
8/15/2014 2:32:57 PM 0.	ст.; AnalvDiteDate: 09/12/2014	Batch: 4227045	SEQ Batch, Test: None	Work Ord, Lot, Sample Date	Comments: All Clients for Bat 384868, CH2M H3 384868, CH2M H3 4418ClAD-SAMP CONSt Co-60 RDL:2 Co-60 R	

9/11/2014 3:56:26 PM

ICOC Fractoptenrams for Astatus Report ByDate: 9/11/2013, 9/16/2014, Batch: '4227045', User: *ALL Order By DateTimeAccepting

rk Ord C	urStatus	A	ccepting		SOPs,Reagents,Comments
			, , , , , , , , , , , , , , , , , , , ,		
Rev	/1C	NeyensA	9/4/2014 12:38	:22 PM	
	ı	NeyensAR	IsBatched	9/4/2014 12:35:53 PM	ICOC_RADCALC v4.9.0
	i	NeyensA	InPrep	9/4/2014 12:38:22 PM	RL-GAM-001 REVISION 4
	I	BuliJ	InCnt1	9/8/2014 1:42:19 PM	RL-CI-007 REVISION 3
	i	BullJ	CalcC	9/9/2014 8:51:12 AM	RL-CI-007 REVISION 3
	,	AntonsonL	Rev1C	9/11/2014 3:56:10 PM	RL-DR-001 Rev 5
		BullJ	9/8/2014 1:42:1	9 PM	
		BullJ	9/9/2014 8:51:1	2 AM	
	·	AntonsonL	9/11/2014 3:56	:10 PM	
		 		Rev1C NeyensA 9/4/2014 12:38 NeyensAR IsBatched NeyensA InPrep BullJ InCnt1 BullJ CalcC AntonsonL Rev1C BullJ 9/8/2014 1:42:1 BullJ 9/9/2014 8:51:1	Rev1C NeyensA 9/4/2014 12:38:22 PM NeyensAR IsBatched 9/4/2014 12:35:53 PM NeyensA InPrep 9/4/2014 12:38:22 PM BullJ InCnt1 9/8/2014 1:42:19 PM BullJ CalcC 9/9/2014 8:51:12 AM AntonsonL Rev1C 9/11/2014 3:56:10 PM BullJ 9/8/2014 1:42:19 PM BullJ 9/9/2014 8:51:12 AM

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt:4 ICOCFractions

		1	•						222	
384868, CH2M Hill Plateau Remediation Company		BN I-129 Prp/Sep GAM002	GAM002				ιL	Pipet #:	orrespective of	
, Pacinc Northwest Ivanonal Lad		TB Gamma by LEPD	PD			•	7 F.C. 4	<u>;</u>	must add stable &	
AnalyDueDate: 09/12/2014		5I CLIENT: HANFORD	-ORD			-	Sept DI/Im lech:	lech:	e tillaga.	
≥	ATER pCi/L postula pDCi/L postula pDCi Approva PDC Approva PDCC APPROV	EDSE 4007044 AB	PM, Quote: SS, 57671	SS , 57671			Sep2 DT/Tm Tech:	Tech:		
OEQ Dalcil, 1691. NOII6 All 16919. 464	A1040 0100, 4227048	150, 4527044 70	CO, 422/049 BINES,				Prep	Prep Tech: ,NeyensA	ısA	
Work Ord, Lot, Total Total Sample Date Amt/Unit Acidified/	Unit Amt/Unit	Adj Aliq Amt OC (Un-Acidified)		Dish Size		<u> </u>	Detector Count Id (24h	Count On Off CR (24hr) Circle Ini	CR Analyst, Com Init/Date	Comments:
*M4MMT-1-AA	3816.60g,in	3816.60g ∕ ITA	ITA14325		34.40mg /				~~	
J4H140432-1-SAMP		×	08/12/14				12	L010	14/6	1000
					2	•			3)///	χ 3
08/12/2014 10:5/	Amthec: 2X4LP	#C0U	ers: 2			SQL	Alpha: 1.46E-U3 uCi/Sa	U/Sa	Beta: -2.80E-U5 UCI/5a	Na Na
2-M4MMT-1-AC-X	3836.80g,in	3836.80g/ ITA	ITA14326 08/12/14		34.60mg		五	\ \ -	नुहाम्बुल	
			1/2/14 3/1		`			polyment de		
08/12/2014 10:57		P #Containers: 2	== ers: 2			Scr. A	Alpha: 1.46E-03 uCi/Sa	Si/Sa	Beta: -2.86E-05 uCi/Sa	Se
8 M4MMV-1-RA	3816.20g,in	3816.20g ITA	ITA14327		33.60mg ,		2			pto
		80	08/12/14		\					em
								30/10	201:01:30 30£ 3 :0+0 a	
1162014 12.33	AIIIITEC. ZA4LP	50	els. z			SCI.	Aprila. Z.UUE-US U	Oloda S	Deta: 3.70E-03 uOV	
4M4MMW-1-AA	3798.40g,in	3798.40g 1TA	1TA14320 08/12/14		34.60mg		E	15.24	2 2	16,
			+1/7/16		\					2(
08/12/2014 12:35	AmtRec: 2X4LP #Containers	P #Containers: 2	ers: 2			Scr. A	Alpha: 1.05E-03 uCi/Sa)i/Sa	Beta: 8.26E-04 uCi/Sa	
S MAMMX-1-AC	3804.40g,in	3804.40g	ITA14328		34.30mg		1,	+	+	
J4H140432-4-SAMP		80	08/12/14							
	AmtRec: 2X50	AmtRec: 2X500MLP;1XLP;2X4LP	#Containers: 5			Scr. A	Alpha: 2.31E-03 uCi/Sa	Ji/Sa	Beta: 1.78E-04 uCi/Sa	Sa
S MAMRG-1-AA-B	3570.70g,in	3570.70g	ITA14329		34.70mg	bnow.	7	1181	All Mallo	
50000-49-BLK		88	08/12/14		\			-	-	
		######################################				Scr.	Alpha:	The second secon	Beta:	
M4MR6-1-AC-C	3611.60g,in	3611.60g	ISD1737		35.70mg ,		2			۱ ۱
		88	08/18/14		\			-)	\ \	
08/28/2014 07:48 pd		#Containers: 1	,			Sor.	Alpha:		Beta:	
¥										,
TestAmerica Key: In - Initial Amt,	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 -	ed Amt, s1 - Sep1, s	2 - Sep2 Page 1		ISV - Insufficient Volume for Analysis	t Volume fo	or Analysis		WO Cht: 7	

						\$eptember 16, 2014	\tau
					Comments:	September 10, 2014	ICOC v5.1.4
					CR Analyst, Init/Date		^ ^
Balance Id:,,	Pipet #:	Sep1 DT/Tm Tech:	Sep2 DT/Tm Tech:	Prep Tech:	Count On Off (24hr) Circle		10
8		Sep1 DT	Sep2 DT	<u>,</u>	Detector C	57671. SV - Insufficient Volume for Analysis	IMe 10r Ariarysk
					Count / Time Min	os ufficient Volu	nsuincient volu
ysis					Ppt or Geometry	` ш ш ш ш	- >0
Preparation/Analysis			- III		r Dish Size	ral Lab, SS Y ODRS: Y ODRS:	2 1 Added
Preparat	M002	Q			te Tracer	Pacific Northwest National Subt.: N Sci.Not.: Y Subt.: N Sci.Not.: Y Subt.: N Sci.Not.: Y Subt.: N Sci.Not.: Y	epz raye , ct-Cocktailec
Sample	BN I-129 Prp/Sep GAM002	TB Gamma by LEPD 5I CLIENT: HANFORD			QC Tra Prep D	Lfic North	Sep1, sz - 5 richment Cell
	BN 1-129 P	TB Gamm 51 CLIEN			Adj Aliq Amt (Un-Acidified)	BIK BIK	utea Amit, s.t nce Dt, ec-Eni
			pCi/L		Initial Aliquot Amt/Unit	Wemediation Company Pacific Northwest Coi/L LCL: UCL: RPD: Pecay to SaDt: Y Blk Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.: N Sci Decay Subt.:	in - Initial Amt, Ti - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 — Page z pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added
					Total Acidified/Unit	au Remediatidist: pci/L Decay to Decay to Decay to	Amt, ıı-rııı Ot, dc-Date (
2 PM)9/12/2014		one	Total Amt/Unit	for Batch: CH2M Hill Plateau Remediation Company The Constituent List: RDL:0.50E+00 pci/L LCL: C: Level (#s).: 2 Decay to SaDt: Y C: Level (#s).: 2 Decay to SaDt: Y C: Level (#s).: 2 Decay to SaDt: Y C: Level (#s).: 2 Decay to SaDt: Y C: Level (#s).: 2 Decay to SaDt: Y C: Level (#s).: 2 Decay to SaDt: Y C: C: C: C: C: C: C: C: C: C: C: C: C:	Key: In - Iniual pd - Prep I
8/15/2014 2:33:02 PM	0, ,	AnalyDueDate: 09/12/2014	Batch: 4227049	SEQ Batch, Lest: None	Work Ord, Lot, Sample Date	All Clients for Batch: 384868, CH2M Hill Pl M4MWTIAA-SAMP Constituen 1-129 RDL:0.50E+ W4MR61AA-BLK: C Uncert Level (#s).: WMMR61AC-LCS: Uncert Level (#s).: Uncert Level (#s).: Uncert Level (#s).: Uncert Level (#s).: AAMR61AC-LCS: Uncert Level (#s).:	

9/11/2014 3:41:37 PM

ICOC Fraction Franchisto Report ByDate: 9/11/2013, 9/16/2014, Batch: '4227049', User: *ALL Order By DateTimeAccepting

Batch Wo	ork Ord CurSta	tus /	Accepting		SOPs,Reagents,Comments
227049					
C	Rev1C	NeyensA	9/4/2014 8:03:4	15 AM	
iC		ReynaV	IsBatched	8/28/2014 7:23:59 AM	ICOC_RADCALC v4.9.0
2		NeyensA	InPrep	9/4/2014 8:03:45 AM	RL-GAM-002 REVISION 4
9		ReynaV	InPrep	9/4/2014 8:05:00 AM	RL-GAM-002 REVISION 4
7		BullJ	InCnt1	9/4/2014 1:02:29 PM	RL-CI-007 REVISION 3
		BullJ	CalcC	9/7/2014 4:39:37 PM	RL-CI-007 REVISION 3
ent C		AntonsonL	Rev1C	9/11/2014 3:41:31 PM	RL-DR-001 Rev 5
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		ReynaV	9/4/2014 8:05:0	00 AM	
. ķ 		BullJ	9/4/2014 1:02:2	29 PM	
		BullJ	9/7/2014 4:39:3	37 PM	
Ś		AntonsonL	9/11/2014 3:41:	:31 PM	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5
ICOCFractions

					4	(3)	727
8/15/2014 2:32:49 PM Sample Pr	Preparation/Analysis	nalysis			Balance Id:,,		
384868, CH2M Hill Plateau Remediation Company 5S C-14 Prp/Sep LSC008	8				Pipet #:		
AnalyDueDate: 09/12/2014 51 CLIENT: HANFORD				Sep1	Sep1 DT/Tm Tech:		
R pCi/L	PM, Quote: SS, 57671	57671		Sep2	Sep2 DT/Tm Tech:		
					Prep Tech:		
Work Ord, Lot, Total Total Initial Aliquot Adj Aliq Amt QC Tracer Sample Date Amt/Unit Acidified/Unit Amt/Unit Prep Date	Tracer Yield	Dish Ppt or Size Geometry	or Count etry Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M4L8C-1-AC							
J4H130433-3-SAMP	10		Ser		Alpha:	Ш	Beta:
2 M4L8C-1-AG-X							
J4H130433-3-DUP	10		Scr		Alpha:		Seta:
3 M4L8G-1-AC							oten
### ##################################	10		Sar		Alpha:		nber Beta:
							16,
J4H130433-8-SAMP			Scr		Alpha:		2014 Beta:
5 M4L8Q-1-AC							
14H130433-11-SAMP	7		Scr:		Alpha:		Beta:
6 M4MRQ-1-AA-B							
J4H150000-41-BLK			Scr.		Alpha:	В	Beta:
7 M4MRQ-1-AC-C							
			Sar		Alpha:	m	Beta:
TestAmerica Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 Richland Wa pd - Prep Dt. dc - Date Chq. r - Reference Dt. ec-Enrichment Cell, ct-Cocktailed Added	2 Page 1 -Cocktailed Added		ISV - Insufficient Volume for Analysis	ume for Anal	ysis	MC	WO Cnt: 7 ICOC v5.1.4

Sept DT/Tr Sep	14 Pro/Jen	Sample Preparation/Analysis	Balance Id:,	
Sept DT/Tm Tech: Sept DT/Tm	S3 Carbon-14 by L	o LSC008 y Liquid Scint	Pipet #:	
Time Time	51 CLIENT: HANFO	NFORD	Sep1 DT/Tm Tech:	
Tracer Dish Pot or Count Dish Pot or Count Dish Pot or Count Dish Dis			Sep2 DT/Tm Tech:	
Tracer Dish Pot or Count Delector Count On Off CR Analyst. Comments: Scr. Alpha: Beta: Beta:			Prep Tech:	
Scr. Alpha: Beta: Apple: Beta: NO Cht: 8	Adj Aliq Amt (Un-Acidified)	C Tracer Tracer Dish Ppt or Count rep Date Yield Size Geometry Time Min	-	
Sor. Apha: Befa: Soc. Soc. Apha: Befa: Soc.				
Sor. Alpha: Befa: Befa: Sor. Alpha: Befa: Be				
iep2 Page 2 ISV - Insufficient Volume for Analysis WO Gnt: 8	#Containers: 1		Alpha:	Befa:
ep2 Page 2 ISV - Insufficient Volume for Analysis WO Cn				
	In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - S	ep2 Page 2	me for Analysis	WO Cht: 8

9/12/2014 8:29:52 AM

ICOC Fractoristerstatus Report ByDate: 9/12/2013, 9/17/2014, Batch: '4227041', User: *ALL Order By DateTimeAccepting

k Ord CurStat	us A	ccepting		SOPs,Reagents,Comments
Rev1C	DawkinsO	9/9/2014 9:29:4	∮9 PM	
	nortonp	IsBatched	9/9/2014 1:04:51 PM	ICOC_RADCALC v4.9.0
	DawkinsO	InCnt1	9/9/2014 9:29:49 PM	RL-CI-005 REVISION 3
	BullJ	CalcC	9/11/2014 10:14:19 AM	RL-CI-005 REVISION 3
	AntonsonL	Rev1C	9/12/2014 8:29:12 AM	RL-DR-001 Rev 5
	BullJ	9/11/2014 10:1	4:19	
	AntonsonL	9/12/2014 8:29	:12	
-		Rev1C DawkinsO nortonp DawkinsO BullJ AntonsonL BullJ	Rev1C DawkinsO 9/9/2014 9:29:4 nortonp IsBatched DawkinsO InCnt1 BullJ CalcC AntonsonL Rev1C BullJ 9/11/2014 10:15	Rev1C DawkinsO 9/9/2014 9:29:49 PM nortonp IsBatched 9/9/2014 1:04:51 PM DawkinsO InCnt1 9/9/2014 9:29:49 PM BullJ CalcC 9/11/2014 10:14:19 AM AntonsonL Rev1C 9/12/2014 8:29:12 AM BullJ 9/11/2014 10:14:19

AC: Accepting Entry; SC: Status Change

TestAmerica Richland Richland Wa.

8/21/2014 1:31:14 PM	Sample		Preparation/Analysis	sis		Balance Id:1120482733	20482733	
384868, CH2M Hill Plateau Remediation Company	FP Tc-99 Prp/Sep LSC014	LSC014	1			Pipet #:		
, Pacific Northwest National Lab	S5 Technetium-99 by Liquid Scint	by Liquid Scir	nt					
AnalyDueDate: 09/12/2014	51 CLIENT: HANFORD	ORD				Sep1 DT/Tm Tech:		
Batch: 4227042 WATER pCi/L		PM, Quote: SS	: SS , 57671			Sep2 DT/Tm Tech:		
SEK Bakki, 1891. Noile						Prep Tech: PeoplesK	eoplesK	
Work Ord, Lot, Total Initial Aliquot Sample Date Amt/Unit Acidified/Unit Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Tracer Prep Date Yield	o Dish Size	Ppt or Geometry T	Count Time Min	Detector Count On Off Id	CR Analyst, Init/Date	Comments:
1 M4LQD-1-AA 130.90g,in	130.90g					, in the second		
J4H120409-1-SAMP	XSOOM P #Contail				ن	Alpha1 OdE-OE iroi'Ga	Bots 8 80E.05 Roll Co.)
	127.30g	1				50000000000000000000000000000000000000		
08/11/2014 07:40 AmfRec: 2	AmtRec: 2X500MLP;1XLP #Contai	#Containers: 3			Scr:	Alpha: -1.12E-04 uCi/Sa	Beta: 4.80E-05 uCi/Sa	
3 M4LQG-1-AC 125.90g,in	125.90g				; ;			pte
044120409-3-SAMP								mb
	X500MLP;1XLP #Cor	#Containers: 3			Scr.	Alpha; 9.37E-04 uCi/Ṣa	Beta: 6.93E-05 uCi/Sa	i
125.20g,in	125,20g							16,
								201
39		#Containers: 3			Scr:	Alpha: 9.37E-04 uCi/Sa	Beta: 6.93E-05 uCi/Sa	
5 M4LQJ-1-AE 126.50g,in	126.50g							
J4H120409-4-SAMP	XSOOMI POXI P	#Containers: 4				Alpha - 8 D2E-04 nCi/Sa	Reta - 9 30E.04 11Ci/Sa	04 i.Ci/Sa
6 M4LQJ-1-AG-S 127.30g,in	127.30g TCSC	TCSG3515						
08/14/14.pd 08/14/14.pd 08/14/14.pd 08/14/14.pd 08/14/14.pd 07/10/105.rd 07/10/105.rd 07/10/105.rd 07/10/105.rd 07/10/105.rd 07/10/105.rd 07/10/105.rd 07/10/10/10	08/14	/14,pd 1/05,r						
08/11/2014 11:26 AmtRec: 2	X500MLP;2XLP #Con	fainers: 4			Scr.	Alpha: 6.02E-04 uCi/Sa	Beta: 2,32E-04 uCi/Sa	04 uCi/Sa
	127.7Ug							
	X500MLP;2XLP #Con	tainers: 4			Scr.	Alpha: 1.86E-04 uCi/Sa	Beta: 2.32E-04 uCi/Sa	04 uCi/Sa
TestAmerica Key: In - Initial Amt, fill Final Amt, dil - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 Birahand Wa nd - Pren Df. dc - Date Chair - Beference Df. ec-Enrichment Cell of - Cookfailed Added	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - - Date Charr - Beference Dt. ec-Forichment Ce	- Sep2 Page 1	1 Added	ISV - Insuffi	cient Volum	SV - Insufficient Volume for Analysis	WO Prep. Sam	WO Cnt: 7 Prep. SamplePrep.v4.8.69

8/21/2014 1:31:15 PM	Sample Preparation/Analysis	nalveis		Balance 14:41.00480722	74807233	
				חמומווכב ועיו וצי	7±021303,	
384868, CH2M Hill Plateau Remediation Company , Pacific Northwest National Lab	FP Tc-99 Prp/Sep LSC014 S5 Technetium-99 by Liquid Scint			Pipet #:		
AnalyDueDate: 09/12/2014	51 CLIENT: HANFORD		Š	Sep1 DT/Tm Tech:		
Batch: 4227042 WATER pCI/L	PM, Quote: SS, 57671	57671	აგ 	Sep2 DT/Tm Tech:		
SEQ BAICH, 16ST. NOTIG				Prep Tech: ,PeoplesK	oplesK	
Work Ord, Lot, Total Total Initial Aliquot Sample Date Amt/Unit Acidified/Unit Amt/Unit	Adj Aliq Amt QC Tracer Tracer (Un-Acidified) Prep Date Yield	Dish Ppt or Count Size Geometry Time Min	Count Detector me Min Id	Count On Off (24hr) Circle	CR Analyst, Co	Comments:
8 M4L8C-1-AF 124.90g,in	124.90g		:		-	
J4H130433-3-SAMP	9XLP;1X500MLP #Containers: 10		Scr: Ajph	Alpha: -2.91E-04 uCi/Sa	Beta: 7.09E-04 uCi/Sa	Ci/Sa
9 M4L8G-1-AF 126.90g,in	126.90g				i i	,
J4H130433-6-SAMP			You Alak	Alnha: 7.20F-04 uCi/Sa	Rate: 2 04E-08 InCiCe	Į
	, 125.10g					Т
0 J4H130433-11-SAMP						teml
	AmfRec: 6XLP;1X500MLP #Containers: 7		Scr. Alph	Alpha: 2.03E-04 uCi/Sa	Beta: -6.93E-05 uCi/Sa	
11 M4MMX-1-AD 125.00g,in	125.00g					16
						, 20
	AmtRec: 2X500MLP;1XLP;2X4LP #Containers: 5		Scr: Alph	Alpha: 2.31E-03 uCi/Sa	Beta: 1.78E-04 uCi/Sa	
12 M4MRW-1-AA-B 127.50g,in	127.50g					•
	######################################		Scr.	Alpha:	Beta:	
13 M4MRW-1-AC-C 128.20g,in	128.20g TCSE2923					
J4H150000-42-LCS	08/14/14.pd O8/14/14.pd OR/14/14.pd AmtRec #Containers 1		70%	∆linha.	Boto.	
J4H150000-42-IBLK			٠,٠٠٠	Alsho.		
				Aprila.	ספומי.	
TestAmerica Key: In - Initial Amt, fi - Final Amt, di - Di	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2	ISV - Insufficient Volume for Analysis	t Volume for /	Analysis	WO Cut: 14	14
Richland Wa. pd - Prep Dt, dc - Date Chg, r - Refere	pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added				Prep_SamplePrep v4.8.69	Prep v4.8.69

No. Principle St. Technologies Principle Sept. Scotland Sept.	8/21/2014 1:31:16 PM	31:16 PM		Sa	Sample Preparation/Analysis	paration	//Analys	sis			Balance Id:,,		
Pop Pop				FP Tc-99 Prp/ S5 Technetiu	Sep LSC014 m-99 by Liqu	id Scint					Pipet #:_	-	
Point Initial Allaton Adj Alla Ann Oc Tracer Tracer Tracer Deh Pet or Count Delectro Count on Ori Pet or Count Delectro Count on Ori Pet or Pet or Count Delectro Count on Ori Pet or Pet or Count Delectro Count or Ori Pet or Pet o	AnalyDueDa	te: 09/12/2014		51 CLIENT: H	ANFORD					Sep1 [)T/Tm Tech:		
	Batch: 4227	042 it: None	pCi/L					8		Sep2)T/Tm Tech:		
Trade Initial Allquot Adj Aliq Amt Corrason Prep Date Yield Size Gaomatry Time Min Id Clark Count On Off Clark Count On Off Clark											Prep Tech:		
	Work Ord, Lot, Sample Date	Total Amt/Unit	Fotal Initial Aliquot Initial Aliquot Ified/Unit Amt/Unit Initial Amt/Unit In		QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min		Count On Off (24hr) Circle		Comments:
###	5 M4MRW-1-AE-	·BN											
Amit, fil. Final Amit, dil. Dillited Amit, st. Sept.), s.2 - Sept. Page 3 ISV - Insufficient Volume for Analysis.	14H150000-42-I												
Key. In - Initial Amt. 11 - Final Amt. dl - Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. Page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept., sc - Sept. page 3 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept. page 4 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept. page 4 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept. page 4 My Prom the de - Date Chan c. Redisconse Diluted Amt. st - Sept. page 4 My Prom the de - Date Chan c. Redisconse Diluted Am	8/15/2014 14:3		AmtRec:	#Conta	iners: 1				Scr		Apha:	-	Beta:
Key: In - Initial Amt, fir Final Amt, dir Diluted Amt, s1 - Sep1, s2 - Sep2 Page 3 ISV - Insufficient Volume for Analysis and - Pran Differ to - Date Charge. Befarence Difference Differen													September 16, 2014
partiep D., acreate oig, in neighbor D., ecretificinien Ceil, cirocktailed Added	TestAmerica Richland Wa.	Key: In - Initial Amt, pd - Prep Dt, d	, fi - Final Amt, di - Dilu dc - Date Chg, r - Referer	rted Amt, s1 - Sep ice Dt, ec-Enrichn	11, s2 - Sep2 nent Cell, ct-Co	Page 3 cktailed Add	pe	usu - NSI	fficient Volum	e for Analys	sis	W(Prep_S	O Cnt: 15 amplePrep v4.8

9/3/2014 4:34:35 PM

6:

ICOC Fraction for Status Report ByDate: 9/3/2013, 9/8/2014, Batch: '4227042', User: *ALL Order By DateTimeAccepting

Batch Work O	rd CurStat	us A	ccepting		SOPs,Reagents,Comments
227042					
C	Rev1C	PeoplesK	8/21/2014 1:31	:53 PM	
C		PeoplesK	Prep1C	8/21/2014 1:31:53 PM	RL-PRP-004 REVISION 3
C		carneyam	IsBatched	8/25/2014 1:24:03 PM	ICOC_RADCALC v4.9.0
C		CarneyA	Sep2C	8/26/2014 12:25:42 PM	RL-LSC-014 REVISION 3
C		BourneD	Sep2C	8/26/2014 12:26:33 PM	RL-LSC-014 REVISION 3
C		BullJ	InCnt1	8/26/2014 1:13:33 PM	RL-CI-005 REVISION 3
C		BullJ	CalcC	8/28/2014 2:12:33 PM	RL-CI-005 REVISION 3
		AntonsonL	Rev1C	9/3/2014 4:33:31 PM	RL-DR-001 Rev 5
;		CarneyA	8/26/2014 12:2	5:42	
The state of the s		BourneD	8/26/2014 12:2	6:33	
		BullJ	8/26/2014 1:13	:33 PM	
ige (1)		BullJ	8/28/2014 2:12	:33 PM	
√3 ?		AntonsonL	9/3/2014 4:33:3	31 PM	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland Richland Wa.

					is:		Se	otember	16, 2014				
					Comments:	Beta: 4.80E-05 uCi/Sa	Beta: 6.93E-05 uCi/Sa	Beta: 2.32E-04 uCi/Sa	Beta: 2.32E-04 uCil/Sa	Beta:	Beta:	Beta:	WO Cnt. 7
					CR Analyst, Init/Date	Beta: 4	Beta: 6.	Beta: 2.	Beta: 2.				
Balance Id:,,	Pipet#:_	Sep1 DT/Tm Tech:	Sep2 DT/Tm Tech:	Prep Tech:	Count On Off (24hr) Circle	E-04 uCi/Sa	-04 uCl/Sa	E-04 uCi/Sa	E-04 uCi/Sa	Alpha:	Alpha:	Alpha:	<u>.</u>
C		Sep1 D1	Sep2 D1		Detector (Alpha: -1.12E-04 uGi/Sa	Ajpha: 9.37E-04 uCi/Sa	Alpha: 6.02E-04 uCi/Sa	Alpha: 1.86E-04 uCi/Sa	Alī	Ak	i A	(S) They officially Wolling for Analysis
					Count Time Min	SGT	SGT	Sor	Sar:	Scr.	Sor.	Sor	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
Sis					Ppt or Geometry								7.01
/Analys			, 57671		Dish Size								
Preparation/Analysis	Ŧ		PM, Quote: SS		Tracer Yield						0	0	7
Sample Pre	AR H-3 Prp/Sep LSC005 S6 Tritium by Liquid Scint	IANFORD	PM,		QC Tracer Prep Date	#Containers: 3	#Containers: 3	#Containers: 4	#Containers: 4	#Containers: 1	#Containers: 10	#Containers: 10	0
Sa	AR H-3 Prp/Sep LSC005 S6 Tritium by Liquid Sci	51 CLIENT: HANFORD			Adj Aliq Amt (Un-Acidified)						-	AmtRec: 9XLP;1X500MLP #Conta	
	•	ιΩ			Initial Aliquot Av Amt/Unit (U					MRRec: 1XLP	AmfRec: 9XLP;	III III III III III III III III III II	2
	on Compa		pCi/L										i
	Remediati Lab	ヰ	HH HH		Total Acidified/Unit								
53 PM	CH2M Hill Plateau Remediation Company Northwest National Lab	09/12/201	WATER	<u> </u>	Total Amt/Unit								
8/15/2014 2:32:53 PM		AnalyDueDate: 09/12/2014	Batch: 4227044	מוטוי, ו פאר ו	Work Ord, Lot, Sample Date	1 M4LQF-1-AA J4H120409-2-SAMP 	2 M4LQG-1-AA 34H120409-3-SAMP	3 M4LQJ-1-AA 3 M4LQJ-1-AA 8 WH120409-4-SAMP 5	& M4LQK-1-AA J4H120409-5-SAMP 	5 M4L8A-1-AA J4H130433-2-SAMP W W W W W W W W W W W W W W W W W W W	6 M4L8C-1-AA J4H130433-3-SAMP —	7 M4L8G-1-AA J4H130433-6-SAMP ——	
8/15/2	384868, , Pacific	Analy	Batch)]]	Work	1 M4L(2 M4L/2(でPa磅 12188	J4H12(5 M4L8 34H130 08/13/2	6 M4L8 J4H130 	7 M4L8 J4H13C	F

					CR Analyst, Comments: Init/Date	Beta:	Seta:	otember 1	16, 2014 Beta:	Befa:	Beta:	Beta:	WO Cnt: 14
Balance Id:,,	Pipet #:	Sep1 DT/Tm Tech:	Sep2 DT/Tm Tech:	Prep Tech:	Detector Count On Off CR Id (24hr) Circle Ir	Alpha:	Alpha:	Alpha:	Alpha:	A(pha:	Alpha:	Alpha:	for Analysis
/sis					Count ime Min	Sor.	Sor:	Sor	Sor:	Sor	Sor.	Sor	ISV - Insufficient Volume for Analysis
Sample Preparation/Analysis	ep LSC005	/ Liquid Scint JANFORD	PM, Quote: SS, 57671		QC Tracer Tracer Dish Prep Date Yield Size	#Containers: 7	P #Containers: 5					#Containers: 1	p1, s2 - Sep2 Page 2
Sa	•	S6 Tritium by Liquid So 5I CLIENT: HANFORD	pCi/L		Initial Aliquot Adj Aliq Amt Amt/Unit (Un-Acidified)	-	MI				-		fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2
::54 PM	384868, CH2M Hill Plateau Remediation Company	vest induction Lab	WATER	None	Total Total Amt/Unit Acidified/Unit		Mariana Ma Mariana Ma Ma Ma Mariana Mariana Mariana Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma M				X	¥ 2	Key: In - Initial Amt, fi - Fin
8/15/2014 2:32:54 PM	384868, CH2M	AnalyDueDate: 09/12/2014	Batch: 4227044	SEQ Batch, Test: None	Work Ord, Lot, Sample Date	8 M4L8Q-1-AA J4H130433-11-SAMP —	9 M4MMX-1-AA J4H140432-4-SAMP 	10 M4MMX-1-AF-X eg 44H140432-4-DUP ch	dd M4MR1-1-AA-B J4H150000-44-BLK 	12 M4MR1-1-AC-C J4H150000-44-LCS	13 M4MR1-1-AD-BN J4H150000-44-IBLK 	14 M4MR1-1-AE-BN J4H150000-44-IBLK 	TestAmerica

8/15/2014 2:32:56 PM		Sa	Sample Pre	Preparation/Analysis	/Analys	is			Balance Id:,,		
0, ,		AR H-3 Prp/Sep LSC005	p LSC005						Pipet#:		
AnalyDueDate: 09/12/2014		S6 Tritium by Liquid Scint 51 CLIENT: HANFORD	Liquid Scin ANFORD	Į.				Sep1 I	Sep1 DT/Tm Tech:		
Batch: 4227044	pCi/L							- Sep2 I	Sep2 DT/Tm Tech:		
SEQ Batch, Test: None									Prep Tech:		
Work Ord, Lot, Total To Sample Date Amt/Unit Acidifi	Total Initial Aliquot Acidified/Unit Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size		Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Comments:											
384868, CH2M Hill Plateau Remediation Company	temediation Company	. Pacific North	Northwest	west National I	Lab, SS	, 57671)
M4LQF1AA-SAMP Constituent List: H-3 H-3 KAMR11AA-BLK: D MARA11AC-LCS: C MARA11AD-IBLK: MARA11AB-IBLK: MARA11AB-IBLK:	pci/L LCL:70	UCL:130	RPD: 20								eptember 16, 2
Calc Info: evel (#s).: 2	Decay to SaDt: Y	Blk Subt.:	×	Sci.Not.: Y	ODRs:	щ					.014
evel (#s).: 2	Decay to SaDt: Y	Blk Subt.:	z	Sci.Not.: Y	ODRs:	Д					
vel (#s).: 2	Decay to SaDt: Y	Blk Subt.:	z	Sci.Not.: Y	ODRs:	д					
M4MKLLAD-LBLK: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N		Sci.Not.: Y	ODRs: 1	В					
vel (#s).: 2	Decay to SaDt: Y	Blk Subt.: N		Sci.Not.: Y	ODRs:]	щ					
TestAmerica Key: In - Initial Amt, Richland Wa nd - Prep Dt. do	In - Initial Amt, fir Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 nd - Prep Dt. dc - Date Chg. r - Reference Dt. ec-Enrichment Cell. ct-	sted Amt, s1 - Se	11, s2 - Sep2 nent Cell. ct-C	sep2 Page 3		ISV - Insi	ISV - Insufficient Volume for Analysis	me for Analy	/sis	M	WO Cnt: 14 ICOC v5.1.4
		22 12 22	10011 C Curs - 1 -		3						

9/9/2014 11:47:48 AM

ICOC Fraction Thansfer Status Report ByDate: 9/9/2013, 9/14/2014, Batch: '4227044', User: *ALL Order By DateTimeAccepting

Q Batch Worl	k Ord CurStati	us Ad	cepting		SOPs,Reagents,Comments
4227044					
AC	Rev1C	WilkinsonA	8/18/2014 11:	:25:32	
SC		WilkinsonA	Sep1C	8/18/2014 11:25:32 AM	RL-LSC-005 REVISION 4
SC		BullJ	InCnt1	8/18/2014 11:49:01 AM	RL-CI-005 REVISION 3
SC		BullJ	CalcC	8/20/2014 2:10:50 PM	RL-CI-005 REVISION 3
SC		nagels	Rev1C	9/9/2014 11:47:33 AM	RL-DR-001 Rev 5
AC		BullJ	8/18/2014 11:	:49:01	
AC		BullJ	8/20/2014 2:1	0:50 PM	
AC		nagels	9/9/2014 11:4	17:33	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland Richland Wa.

Page 1

Grp Rec Cnt: 4 **ICOCFractions**

September 16, 2014

*** RE-COUNT REQUEST ***

DUE DATE	9/19	and the state of t
CUSTOMERC	MG	
ANALYSIS (him	
MATRIX	ter	
LOT NUMBER	SHHIS	9009
SAMPLE DELIVERY	Y GROUP	
OLD BATCH NUMB	BER 426	07044
NEW BATCH NUMB	3ER 421	18049 -
. •		
LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) MHMRIQ	Ap	Duce at
2) M1 M MX	AAGY	
3) MIMMY	SAF	Souras conte on
4) MHMRI	QAA .	Work wissed MNA
5)		
6)		
7)		
8)		·
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		·
19)		
20)		

9/5/2014 5:23:41 PM	Sample Prep	Preparation/Analysis	alysis		Balan	Balance Id:,			
384868, CH2M Hill Plateau Remediation Company	AR H-3 Prp/Sep LSC005				ā.	Pipet #:			
, Pacific Northwest hallonal Lab AnalyDueDate: 09/12/2014	S6 Tritium by Liquid Scint 51 CLIENT: HANFORD				Sep1 DT/Tm Tech:	Tech:			
Batch: 4248049 WATER pCi/L	PIM, Q	PM, Quote: SS, 57671	<u>671</u>		Sep2 DT/Tm Tech:	Tech:			
SEQ Batch, Test: None All Tests: 422/040 DHSS, 422/04	42 FPSS, 422/044 ARSS, 422/04	9 BN 1 B, 424804	a ARSo,		Prep	Prep Tech:			
Work Ord, Lot, Total Total Initial Aliquot Sample Date Amt/Unit Acidified/Unit Amt/Unit	Adj Aliq Amt OC Tracer (Un-Acidified)	Tracer Dish Yield Size	Ger	Count Time Min	Detector Count Id (24hr	Count On Off Cl	CR Analyst, Init/Date	Comments:	ió
	1		:						
08/12/2014 10:22 AmiRec 2X500MLP;1XLP;2X4LP	X500MLP;1XLP;2X4LP #Containers: 5	5		Scr.	Alpha: 2.31E-03 uCi/Sa	Si/Sa	Beta: 1.78E	Beta: 1.78E-04 uCi/Sa	
08/12/2014 10:22	Amthec: 2X500MLP;1XLP;2X4LP #Containers: 5	2		Scr.	Alpha: 2.31E-03 uCi/Sa	Ji/Sa	Beta: 1.78E-04 uCi/Sa	-04 uCi/Sa	Se
3 M4MR1-2-AA-B 2-3-4H150000-44-BLK 3-3-4H150000-44-BLK 3-3-4H11				Sor	Alpha:		<u> </u>	Beta:	ptember
4 M4MR1-2-AD-B									16,
J4H150000-44-BLK				Scr.	Арћа:		B	Beta:	2014
TestAmerica Key: In - Initial Amt, fi - Final Amt, di - Di	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2	Page 1	nl - VSI	ISV - Insufficient Volume for Analysis	ne for Analysis		OM	WO Cnt: 4	
Richland Wa. pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	ence Dt, ec-Enrichment Cell, ct-Coo	cktailed Added						ICOC v4.9.0	4.9.0

9/5/2014 5:23:42 PM		Se	Sample Preparation/Analysis	paration	/Analys	is			Balance Id:,,		
		AR H-3 Prp/Sep LSC005	ep LSC005	*					Pipet #:_		
AnalyDueDate: 09/12/2014		So rindin by Liquid So 5i CLIENT: HANFORD	HANFORD	<u>-</u>				Sep1 [Sep1 DT/Tm Tech:		
Batch: 4248049	pCi/L						1	Sep2 I	Sep2 DT/Tm Tech:		
SEQ Balcil, lest. Notie									Prep Tech:		
Work Ord, Lot, Total Sample Date Amt/Unit A	Total Initial Aliquot Acidified/Unit Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield		Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Comments: M4MR1-BLK "Comments P-14-00405", P-14-00221, H312B180, S-14-00169 All Clients for Batch: 384868, CH2M Hill Plateau Remediation Company Pacific North	"Comments P-14-00405", P-14-0022	21,H312B180,S-	3180,S-14-00169	National	Lab, SS	, 57671					Se
M4MMX2AA-SAMP Constituent List:	ist:										pte
M44mr12aa-blk: 0											ann
											er 1
W4MMX2AA-SAMP Calc Info: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.:	N	Sci.Not.: Y	ODRs:	щ					16, 2 [,]
Wentizen ben: Uncert Level (#s).: 2 WAWD12an-Rig.	Decay to SaDt: Y	Blk Subt.	Z "	Sci.Not.: Y	ODRs:	щ					U14
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.:	×	Sci.Not.: Y	ODRS:	ф					+
TestAmerica Key: In - Initial Amt, Richland Wa. pd - Prep Dt, d	In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	uted Amt, s1 - Se	ep1, s2 - Sep2 Iment Cell, ct-C	Page 2 Socktailed Add	pel	ISV - Ins	ISV - Insufficient Volume for Analysis	ne for Analy	/sis	M	WO Cnt: 4 ICOC y4.9.0

9/9/2014 11:51:49 AM

ICOC Fraction Transfer Status Report ByDate: 9/9/2013, 9/14/2014, Batch: '4248049', User: *ALL Order By DateTimeAccepting

Q Batch Wo	ork Ord O	CurStatu	ıs	Accepting		SOPs,Reagents,Comments
4248049			. ,			
4 <i>C</i>	Re	ev1C	BullJ	9/9/2014 11:01:	34	
SC			BullJ	CalcC	9/9/2014 11:01:34 AM	RL-CI-005 REVISION 3
SC			nagels	Rev1C	9/9/2014 11:51:44 AM	RL-DR-001 Rev 5
AC			nagels	9/9/2014 11:51:	44	

AC: Accepting Entry; SC: Status Change

TestAmerica Richland Richland Wa.

8/19/2014 4:06:02 PM		Sa	Sample Preparation/Analysis	oaration/	Analys	is.		Be	Balance Id:1120482733,,	0482733,,		
384868, CH2M Hill Plateau Remediation Company	ediation Company	DH UNat Laser Prp KPA001	er Prp KPA00	=					i :			
, Pacific Northwest National Lab		SS Total Uranium by KPA	ium by KPA	•					Pipet #:			
AnalyDueDate: 09/12/2014		5I CLIENT: HANFORD	ANFORD					Sep1 DT,	Sep1 DT/Tm Tech:			
Batch: 4227040 WATER	ng/L		PM, C	PM, Quote: SS, 57671	, 57671			Sep2 DT,	Sep2 DT/Tm Tech:			
OCO Dalbi, Test. Note								a.	Prep Tech: PeoplesK	oplesK		
Work Ord, Lot, Total Acsample Date Amt/Unit Ac	Total Initial Aliquot Acidified/Unit Amt/Unit	Adj Aliq Amt (Un-Acidified)	OC Tracer Prep Date		Dish Size	Ppt or Geometry	Count Time Min	Detector C	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:	
M4LQD-1-AC	25.40g,in	25.40g										
J4H120409-1-SAMP												
08/11/2014 12:57	AmtRec: 2X500MLP	K500MLP #	#Containers: 2				Scr:	Alpha: -1.04E-05 uCi/Sa	-05 uCi/Sa	Beta: 8.80E-05 uCi/Sa	05 uCi/Sa	
M4LQD-1-AD-X	28.00g,in	28.00g										
J4H120409-1-DUP												٩
08/11/2014 12:57	AmtRec: 2)	(500MLP #	#Containers: 2				Scr.	Alpha: -1.04E-05 uCi/Sa	-05 uCi/Sa	Beta: 8.80E-05 uCi/Sa		Se
MALQF-1-AD	27.60g,in	27.60g									ρισ	nte
B J4H120409-2-SAMP a				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					1		-	mŀ
08/11/2014 07:40	Amthec: 2X500MLP;1XLP #Cont	(500MLP;1XLP	#Containers: 3				Scr	Alpha: -1.12E-04 uCi/Sa	04 uCi/Sa	Beta: 4.80E-05 uCi/Sa		er
A M4LQF-1-AE-S	29.80g,in	29.80g	UNSM0203								10	16
J4H120409-2-MS			08/07/14,pd 02/01/86,r							·	,	, 20
08/11/2014 07:40	AmtRec: 2X500MLP;1XLP	(500MLP;1XLP	#Containers: 3				Scr.	Alpha: -1.12E-04 uCi/Sa	04 uCi/Sa	Beta: 4.80E-05 uCi/Sa)14
S M4LQG-1-AD	27.30g,in	27.30g										
J4H120409-3-SAMP							Č		9	-	9	
SM4LQJ-1-AF	27.50g,in	27.50g	#COLLIGITETS: S					Apria: 9.37 E-04 UC//08	04 uoi/sa	pela. 0.35E-03 uoi 9a	uo uoil od	7
J4H120409-4-SAMP											4 4 4 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1
08/11/2014 11:26	AmtRec: 2X500MLP;2XLP #Containers: 4	(500MLP;2XLP	#Containers: 4				Scr.	Alpha: 6.02E-04 uCi/Sa	04 uCi/Sa	Beta: 2.32E-04 uCi/Sa	04 uCi/Sa	
7 M4LQK-1-AF	30.00g,in	30.00g										
1												
08/11/2014 11:26	AmtRec: 2X500MLP;2XLP #Containers: 4	(500MLP;2XLP	#Containers: 4	;			Scr.	Alpha: 1.86E-04 uCi/Sa	04 uCi∕Sa	Beta: 2.32E-04 uCi/Sa	04 uCi/Sa	
TestAmerica Key: In - Initial Amt,	In Initial Amt, fir Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1	uted Amt, s1 - Sep	11, s2 - Sep2	Page 1	ק	ISV - Inst	ıfficient Volun	ISV - Insufficient Volume for Analysis		WO (WO Cnt: 7 Pren SamplePren v4 8 60	90
	, ac Caro Cirgi		IIOIR COII) OF C	כאומווסק ז אמים						- d>-	10 to 10 to	3

8/19/2014 4:06:03 PM	6:03 PM			Š	Sample Preparation/Analysis	paration	/Analys	sis			Balance Id:1120482733,,	20482733,,		
384868, CH2N	384868, CH2M Hill Plateau Remediation Company	emediation Co		DH UNat_Laser Prp KPA001	er Prp KPA0	01					Pinet #.			,
, Pacific North	west National La	3 b		SS Total Uranium by KPA	nium by KPA						1 1 1 1 1			
AnalyDueDat	AnalyDueDate: 09/12/2014			5I CLIENT: HANFORD	HANFORD					Sep1 [Sep1 DT/Tm Tech:			
Batch: 4227040	140 WATER		ng/L		PM,	PM, Quote: SS, 57671	3, 57671			Sep2	Sep2 DT/Tm Tech:			
											Prep Tech: ,PeoplesK	eoplesK		
Work Ord, Lot, Sample-Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	<u></u>	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:	<u> </u>
8-M4MMX-1-AE			25.30g,in	25.30g										
J4H140432-4-SA	J4H140432-4-SAMP	!												
08/12/2014 10:22			AmtRec: 2X.	AmtRec: 2X500MLP;1XLP;2X4LP #C	LP #Containers: 5	S: 5			Scr.	Alpha: 2.3	Alpha: 2.31E-03 uCi/Sa	Beta: 1.7	Beta: 1.78E-04 uCi/Sa	
9-M4MRM-1-AA-B			26.50g,in	26.50g										
J4H150000-40-Bl	LK													
08/19/2014 16:04	08/19/2014 16:04 pd		AmtRec:		#Containers: 1				Scr.		Alpha:		Beta:	0
18M4MRM-1-AC-C			27.70g,in	27.70g	UNSM0204								spt	nt
J4H150000-40-LC	SC				08/07/14,pd .02/01/86.r								em	ρm
g	pd :		AmtRec:		#Containers: 1				Scr:	1	Alpha:		Beta:	hor
11-M4MRM-1-AD-C			25.70g,in	25.70g	UNSL0109								10	10
J4H150000-40-LCS	SS				08/07/14,pd 02/01/86.r), <i>∠</i>	. 2
08/19/2014 16:05		İ			iners: 1				Ser	-			Beta:	014
		1											 	
														-
- 17														
•														
						•								
TestAmerica	Key: In - Initial Amt,	l Amt, fi - Fin	al Amt, di - Dilu	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 -	p1, s2 - Sep2	Page 2		ISV - Insu	ISV - Insufficient Volume for Analysis	ne for Analy	sis	M	WO Cnt: 11	
Richland Wa.	pd - Prep	Dt, dc - Date	Chg, r - Referen	pd - Prep Dt, dc - Date Cng, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added	ment Cell, ct-C	ocktailed Ado	jed					Prep_S	Prep_SamplePrep v4.8.69	.69

												:	
				DH UNat_Laser Prp KPA00 SS Total Uranium by KPA	er Prp KPA001 nium by KPA	001					Pipet #:		
AnalyDueDate: 09/12/2014	09/12/2014			51 CLIENT: HANFORD	IANFORD					Sep1 [Sep1 DT/Tm Tech:		
Batch: 4227040 SEQ Batch, Test: None	lone		ng/L		ļ				`	Sep2 L	Sep2 DT/Tm Tech:		
											Prep Tech: PeoplesK	PeoplesK	
Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date		9	Ppt or Geometry	Count Time Min	Detector Id	Count On Off (24hr) Circle	f CR Analyst, Init/Date	Comments:
Comments: M4MRM-BLK CommentsS-14-00059	IRM-BLK Comn	nentsS-14-00(59										
l l	for Batch:							1					
	CH2M Hill Plateau Remediation Company	au Remediat	ion Company		Pacific Northwest National		Lab, SS	, 57671					Se
M4LQD1AC-SAMP CC WatlQD1AC-SAMP CC WatlQD1AC-SAMP CC WatlQF1AE-MS:	Constituent L	List: ug/L	I.C.L.:	UCL:	RPD:						7		ptemb
M4MRM1AA-BLK: Uranium	RDL:1.44E-01	ng/L	rcr:	DCL:	RPD:								er 1
	RDL:0.144343	ng/L	LCL:70	UCL:130	RPD:20								6, 2
M4MKM1AU-LCS: Uranium RI	RDL:0.144343	ng/L	LCL:70	UCL:130	RPD:20								201
M4LQD1AC-SAMP Calc Info: Uncert Level (#s).:	alc Info: al (#s).: 2	Decay t	Decay to SaDt: Y	Blk Subt.	N SC	Sci.Not.: Y	ODRs:	м					14
M4LQFlAE-MS: Uncert Level	el (#s).: 2	Decay to	o SaDt: Y	Blk Subt.:	Z	Sci.Not.: Y	ODRs:	ф					
M4MRM1AA-BLK: Uncert Level	el (#s).:2	Decay t	to SaDt: Y	Blk Subt.:	×	Sci.Not.: Y	ODRs:	ф					
M4MKMIAC-LCS: Uncert Level	al (#s).:2	Decay to	co SaDt: Y	Blk Subt.:	z	Sci.Not.: Y	ODRs:	щ					
M4MKM1AD-LCS: Uncert Level	el (#s).: 2	Decay t	Decay to SaDt: Y	Blk Subt.: N		Sci.Not.: Y	ODRs:	ф					
TestAmerica	Key. In - Initial Amt		I Amf di-Dilu	fi- Final Amt di-Diluted Amt s1 - Sen1 s2 -	of s2 - Sen2	Page 3		sul - VSI	SV - Insufficient Volume for Analysis	ne for Analy	. <u>v</u>)W	WO Cut: 11
estamenca	Key: In - Initial Amt, II - Final Amt, di - Diluted Amt, SI - Sep1, SZ - Sep2 Fage 3	AMI, II - FIII.	al Amt, al - Ullu	ited Amt, S1 - Se				13V - INS	SUTTICIENT VOIUT	ne tor Analy	SIS	^^	= :E30

9/11/2014 4:16:16 PM

ICOC Fraction Transfer Status Report ByDate: 9/11/2013, 9/16/2014, Batch: '4227040', User: *ALL Order By DateTimeAccepting

Batch Wo	rk Ord C	urStatus	i	Accepting		SOPs,Reagents,Comments
227040						
?	Re	v1C	PeoplesK	8/19/2014 4:06:	12 PM	
			PeoplesK	Prep1C	8/19/2014 4:06:12 PM	RL-PRP-004 REVISION 3
go.			carneyam	IsBatched	8/20/2014 7:08:37 AM	ICOC_RADCALC v4.9.0
			CarneyA	Prep2C	8/21/2014 10:43:33 AM	RL-KPA-001 REVISION 4
			BourneD	Prep2C	8/21/2014 10:43:56 AM	RL-KPA-001 REVISION 4
			Saliful	Cnt1C	9/9/2014 9:23:26 AM	RL-KPA-003 REVISION 4
			AntonsonL	Rev1C	9/11/2014 4:12:05 PM	RL-DR-001 Rev 5
			CarneyA	8/21/2014 10:40	3:33	
•			BourneD	8/21/2014 10:43	3:56	
;			Saliful	9/9/2014 9:23:2	6 AM	
			AntonsonL	9/11/2014 4:12:	05 PM	

AC. Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

				I	TWO CONTRACTOR OF	I	1	Sel	otember	16, 2014		, 1		0
					Comments:	, de de de de de de de de de de de de de	ğ	Beta:	Beta:	, Beta:	Beta:	Beta:	Befa:	WO Cnt: 7 ICOC v4.9.0
Dalaite IV.	Pipet #:	1 DT/Tm Tech:	2 DT/Tm Tech:	Prep Tech:	CR Analyst, Init/Date	A lakes	Aipila.	Alpha:	Alpha:	Alpha:	Alpha:	Alpha:	Alpha:	alysis
	ECT INJECTION	Sep	Sep		Count On Off (24hr) Circle		.550	Sar.	Sor.	Sor:	Sor.	Sor.	SG:	ISV - Insufficient Volume for Analysis
	PERFORMED / DIRE A)		: SS , 57671 4225075 88EA,		nt Detector Min Id									
Jampie i charac	IPLE PREPARATION ım, Hexavalent (7196	HANFORD	PM, Quote CGTH, FPS5,				#Containers: 1	#Containers: 1	#Containers: 1	#Containers: 1	#Containers: 1	#Containers: 1	#Containers: 1	Sep1, s2 - Sep2 Page 1 shment Cell, ct-Cocktailed Added
		51 CLIENT	ARS6,		Initial Aliquot Amt/Unit		Amirec: IX500MLAG	AmtRec: 1X500MLAG	Amtrec: 1X500MLAG	AMTREC: 1X500MLAG	Amtrec: 1X500MLAG	######################################	AmfRec: 1X500MLAG	fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-c
:	au Remediation Compa nal Lab	2014	fs:		Total Amt/Unit									Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - S pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell,
0/ 10/2014 0:02:02 W	38, CH2M Hill Platea ific Northwest Nation	/DueDate: 09/12/2	\$		Work Order, Lot, Sample DateTime	1 M4L79-1-AA J4H130433-1-SAMP	2 M4L79-1-AC-S	J4H130433-1-MS 	3 M4L79-1-AD-D By H130433-1-MSD CE	&M4L79-1-AE-X J4H130433-1-DUP W13/2014 09:23	5 M4L8D-1-AA J4H130433-4-SAMP	6 M4L8E-1-AA J4H130433-5-SAMP O8/13/2014 12:14	7 M4L8H-1-AA J4H130433-7-SAMP 	TestAmerica Key: In - Richland Wa, pd -
		eau Remediation Company 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION PASAVAILED FAILED / DIRECT INJECTION FAILED / DIRECT INJECT / DIRECT INJECT / DIRECT eau Remediation Company 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION EA Chromium, Hexavalent (7196A) 51 CLIENT: HANFORD	shediation Company 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION EA Chromium, Hexavalent (7196A) 51 CLIENT: HANFORD Replication Company 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION Septimal	## Sep 1 Sep 2 Sep 3 Sep 3 Sep 4 Sep 5 Sep 6 Sep 7 Sep 7 Sep 7 Sep 7 Sep 7 Sep 8 Sep	Sept DT/Tm Tech: Sept DT/Tm Tech: Sept DT/Tm Tech: Sept DT/Tm Tech: Sept DT/Tm Tech: Sept DT/Tm Tech: Sept DT/Tm Tech: Sept St. Plateau Remediation Company 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION Pipet #:	Plateau Remediation Company 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION Pipet #: EA Chromium, Hexavalent (7196A) Sept DT/Tm Tech: 51 CLIENT: HANFORD Sept DT/Tm Tech: Prep Tech: Time Min Detector Count On Off CR Analyst, Initial Aliquot Prep Date Time Min Detector Caunt On Off Init/Date In In In In In In In In	Ill Plateau Remediation Company 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION Dipet #:	Marker 17500MLAG #Containers 1 #Containe	Sept DT/m Tech: Sep DT/m Tech: Sep DT/m Tech:	The company St. NO SAMPLE PREPARATION PERFORMED FORECT NUJECTION Paper #				

	1		Sen	tember (1	6, 2014		<u> </u>
	Comments:	Befa:	Beta:	Beta:	Beta:	Beta:	WO Cnt: 12 ICOC v4.9.0
Balance Id:,, Pipet #: Sep1 DT/Tm Tech: Sep2 DT/Tm Tech:	Prep Tech: CR Analyst, Init/Date	Alpha:	Alpha:	Alpha:	Alpha:	Alpha:	lysis
	Count On Off (24hr) Circle	Sar	Scr.	Scr.	Sor:	Scr:	ISV - Insufficient Volume for Analysis
Sample Preparation/Analysis 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION EA Chromium, Hexavalent (7196A) 51 CLIENT: HANFORD PM, Quote: SS, 57671	Detector Id						
Preparation/Analysis PARATION PERFORMED / D valent (7196A) RD PM, Quote: SS, 57671	Count Detector		_	4-			p2 Page 2 ct-Cocktailed Addec
Sample Preparatio 88 NO SAMPLE PREPARATION PE EA Chromium, Hexavalent (7196A) 51 CLIENT: HANFORD PM, Quote: S	QC Tracer Prep Date	#Containers: 1	#Containers: 1	#Containers:	#Containers: 1	#Containers: 1	, s1 - Sep1, s2 - Se ɔ-Enrichment Cell, o
	Initial Aliquot Amt/Unit	AmtRec: 1X500MLAG #Containe	AmfRec: 1X500MLAG #Containe	AmtRec: 1X500MLAG #Containers: 1			In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2 pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added
8/13/2014 5:02:34 PM 384868, CH2M Hill Plateau Remediation Company , Pacific Northwest National Lab AnalyDueDate: 09/12/2014 Batch: 4225075 WATER mg/L	Total Amt/Unit			į I			itial Amt, fi - Final / ep Dt, dc - Date Che
8/13/2014 5:02:34 PM 384868, CH2M Hill Plateau Rer , Pacific Northwest National Lat AnalyDueDate: 09/12/2014 Batch: 4225075 WATER		14L8L-1-AA 1130433-9-SAMP 11	1130433-10-SAMP 	SAMP 13	12-M4L30-1-AA-B J4H130000-75-BLK	1130000-75-LCS	Key:
8/13/2014 5:02:34 PM 384868, CH2M Hill Plate, Pacific Northwest Nationally AnalyDueDate: 09/12, Batch: 4225075 W	SEQ Batch, Test: None Work Order, Lot, Sample DateTime	8 M4L8L-1-AA J4H130433-9-SAMP 08/13/2014 08:23 9 M4L8P-1-AA	J4H130433-10-SAMP	10 M4L8V-1-AA Depth 130433-12-SAMP Depth 130433-12-SAMP Depth 11:13	15M4L9J-1-AA-B J4H130000-75-BLK 08/13/2014 17:01 pc	J4H130000-75-LCS	TestAmerica Richland Wa.

				ents:	September 16, 2014	
				Comments:		
Balance Id:,, Pipet #:	Sep1 DT/Tm Tech:	Sep2 DT/Tm Tech:	Prep Tech:	CR Analyst, Init/Date		
		Sep2 D1		Count On Off (24hr) Circle		
nalysis DRMED / DIREC				Detector Id	b, SS , 57671 ODRS: B ODRS: B	ODRs: B
Preparation/Analysis PARATION PERFORMED / DIRECT INJECTION	lent (7196A)			Count Time Min	west National Lab, Sci.Not.: Y OI Sci.Not.: Y OI	Sci.Not.: Y
Sample P 88 NO SAMPLE PREP	EA Chromium, Hexavalent (7196A) 51 CLIENT: HANFORD		pinery.	QC Tracer Prep Date	Subt.: N Subt.: N	Subt.: N
ON 88	EA Chr 5I CLI			Initial Aliquot Amt/Unit	BIK BIK	ecay to SaDt: Y Blk Subt.: N SC:
		mg/L		tal Unit	Remediatic t: Decay to Decay to Decay to	Ã
8/13/2014 5:02:34 PM	AnalyDueDate: 09/12/2014	Batch: 4225075 SEO Batch Test: None		Work Order, Lot, Sample DateTime Amt/Unit	Comments: All Clients for Batch: 384868, CH2M Hill Plateau R M41.791AA-SAMP Constituent List: WALT.91AA-BLK: WALT.91AA-BLK: WALT.91AA-SAMP Calc Info: Uncert Level (#s)::2 M41.791AD-MSD: WALT.91AA-MSD: WALT.91AA-BLK: WALT.91AA-BLK: WALT.91AA-BLK: WALT.91AA-BLK: WALT.91AA-BLK: WALT.91AA-BLK: WALT.91AA-BLK: WALT.91AA-BLK:	44L9J1AC-LCS: Uncert Level (#s).: 2

-, <u>·</u> 	· · · · · · · · · · · · · · · · · · ·		7/0	,		Se	eptember	16, 2014		1	
				Comments:	. Beta:	Bets:	Beta:	Beta:	Beta:	Beta:	WO Cnt: 6
Balance Id:,, Pipet #:	Sep1 DT/Tm Tech:	Sep2 DT/Tm Tech:	Prep Tech:	CR Analyst, Init/Date	Alpha:	Alnha:	Alpha:	Alpha:	Alpha:	Alpha:	ilysis
CT INJECTION	Sep	Sep2		Count On Off (24hr) Circle	Sor	res	Sar	Scr.	SGT	Scr.	ISV - Insufficient Volume for Analysis
Analysis ORMED/DIRE		57671		Detector Id							-\/SI
Preparation/Analysis PARATION PERFORMED / D	nt (7196A)	PM, Quote: SS, 57671		Count Time Min							Page 1
Sample Preparation/Analysis 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION	EA Chromium, Hexavalent (7196A) 5I CLIENT: HANFORD	PM		QC Tracer Prep Date	#Containers: 1	#Containers 1	#Containers: 1	#Containers: 1	######################################		di - Diluted Amt, s1 - Sep1, s2 - Sep2
	EA Chroi			Initial Aliquot Amt/Unit	AmtRec: 1X500MLAG #Containe	AmBee: 1X500M AG					ii - Diluted Amt, s1
ation Company		ATER mg/L All Tests: 4224083 88EA.		ini A			Am	A	A Particular of the control of the c	Amt	fi - Final Amt, o
8/12/2014 4:04:47 PM 384868, CH2M Hill Plateau Remediation Company Pacific Northwest National I ab	11/2014	3		Total Amt/Unit							Key: In - Initial Amt,
8/12/2014 4:04:47 PM 384868, CH2M Hill Plateau Rem Pacific Northwest National I ab	AnalyDueDate: 09/11/2014	Batch: 4224083 SEO Batch, Test: None		Work Order, Lot, Sample DateTime	1 M4LW7-1-AA J4H120419-1-SAMP 	442W7-1-AC-S 1120419-1-MS	3 M4LW7-1-AD-D 3 M4LW7-1-AD-D 3 M4H120419-1-MSD 5 M1	M4LW7-1-AE-X 1120419-1-DUP 11	5 M4LXD-1-AA-B J4H120000-83-BLK 	6 M4LXD-1-AC-C J4H120000-83-LCS W	
8/12/20 384868, Pacific	AnalyD	Batch: SEO Batc		Work Sample	1 M4LW7-1-AA J4H120419-1-SA 	2 M4LW7-1-AC-S J4H120419-1-MS	3 M4LW7-1-AD-D 	######################################	5 M4LXD-1-AA-B J4H120000-83-B M1	6 M4LXD-1-AC-C J4H120000-83-LCS 	TestAmerica

8/12/2014 4:04:48 PM		Sample	Preparation/Analysis	nalysis		Balance Id:,	
	u ب	88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION	ARATION PERFC	RMED / DIRECT	T INJECTION	Pipet #:	
AnalyDueDate: 09/11/2014	ц	EA Chromium, nexavalent (7196A) 5I CLIENT: HANFORD	alent (7196A) J		Set	Sep1 DT/Tm Tech:	
Batch: 4224083	mg/L				Ser	Sep2 DT/Tm Tech:	
		personal provinces			Private la la la la la la la la la la la la la	Prep Tech:	
Work Order, Lot, Total Sample DateTime Amt/Unit	al Initial Aliquot Juit Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Comments:							
All Clients for Batch: 384868, CH2M Hill Plateau	Plateau Remediation Company	Pacific Northw	west National Lab,	o, ss , 57671			
M4LW71AA-SAMP Constituent List:	;t:						
M4LW71AC-MS Constituent List:							•
a Selw71aD-msD:							
K. StrxDlaa-Blk:							
y 独txd1ac-ics: v							
M4LW71AA-SAMP Calc Info: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B			2014
M4LW/IAC-MS CALC INIO: Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: I	ODRs: B			
M4LW/1AD-MSD: Uncert Level (#s).: 2 M4LXD1aa-ELK.	Decay to SaDt: Y	BIk Subt: N	Sci.Not.: Y	ODRs: B			
Uncert Level (#s) :: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B			
M*LAC-LCS: Uncert Level (#s).: 2	Decay to Sabt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B			
Key	nt, fill-Final Amt, dil-Diluted Amt, s1 - Sep1, s2 - Sep2	Amt, s1 - Sep1, s2 - Se	p2 Page 2	ISV - In	ISV - Insufficient Volume for Analysis	alysis	WO Cnt: 6
No liand wa. po - riep Dt,	pd - rieb ut, uc - Date Oilg, i - Reletence ut, ec-Ennament Cell,	Dt, ec-Eningninent Cell,	ct-Cocktalled Added				ICOC V4.9.0